7018 / 7019 Technical Reference Manual

Table of Contents

1. Service Call Procedures

Section Contents

Introduction

The Service Call Procedures section is used to identify a suspected problem. This section contains Initial Actions, System Checks, Additional Checks, and Final Actions.

Initial Actions are used to gather information regarding the performance of the terminal and perform routine maintenance activities.

System checks are used to verify the normal operation of the terminal. In the Y/N (Yes/No) steps of the system checks, a Yes response will lead you to the next step. A No response will indicate the next step to perform, or will direct you to a Repair Analysis Procedure (RAP).

Additional Checks test various terminal functions not directly tested by system checks.

RAPs will provide the directions to isolate the faulty part or provide a list of suspect parts, when isolation is not appropriate. Wire harnesses are not included in the repair actions and problems with loose connections or damaged harnesses should be isolated using visual inspection and the wiring data in section 7.

Final Actions are used to complete the service call after the problem has been repaired.

Call Flow

The call flow diagram (Figure 1) shows the relationship of actions during a typical service call. The functions in Call Flow correspond to service manual sections as follows:

Section 1	Initial Actions
	System Checks / Additional Checks
	Final Actions
Section 2	Status Indicator Repair Analysis
	Procedures (RAPs)
Section 3	Image Quality Repair Analysis
	Procedures (RAPs)
Section 4	Repair / Adjustment
Section 5	Parts List

All service calls start with Initial Actions and all service calls end with Final Actions.

When fault codes are available, the system check will have you perform certain checks before accessing the RAP for the fault code.

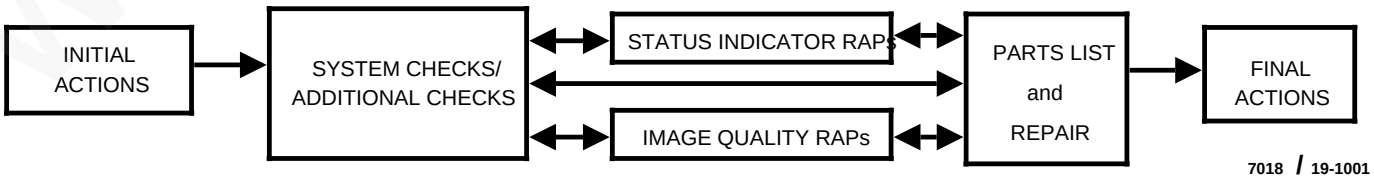


Figure 1. Call Flow Diagram

Initial Actions

Initial Actions are used to gather information from the operator concerning problems at the local terminal. Make note of symptoms, error messages, error codes or other information concerning the problem. This information may help you identify an intermittent or unusual problem.

Procedure

1. Ask operator to describe or demonstrate the problem, if possible. Obtain any information available from a machine maintenance log.
2. If the problem is the result of improper operator action, refer the operator to the user handbook or the customer support center.

NOTE: Any terminal options that are required to be changed by the service representative will be referred to later in the procedure.

3. If M00% is not displayed, verify with customer any requirement of printing the documents in memory before switching off the power or before clearing the memory.
4. Switch off the power.

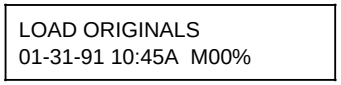
NOTE: Use Xerox Clean Ups to perform the following cleaning functions.

5. Clean the ADF roller (PL 2.2) and the feed roller (PL 2.1). Replace the rollers if the surface is damaged or glazed.
6. Replace the ADF retard pad if previous call occurred more than 90 days prior to this call.
7. Clean the thermal head and scanner area.
8. If the only remaining action required is setting service controlled options, refer to section 6, General Procedures for the procedure. Otherwise, proceed to step 9.
9. Perform the Prepare for System Check.

Prepare for System Check

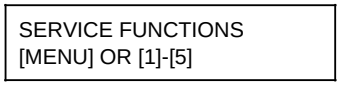
NOTE: If unable to perform any of the following steps or an error message displays, go directly to 7018/7019 Off-line System Checks.

1. Print the Activity report. Note any error codes in the comment section.
   a. Press [Function Menu].
   b. Press [3], [1] on the keypad.
   c. Press [Start/Copy].
2. Print the Options report. Save for final actions.
   a. Press [Function Menu].
   b. Press [3], [5] on the keypad.
   c. Press [Start/Copy].
3. Ensure tones from the speaker can be heard. To set, perform the following:
   a. Press [Function Menu].
   b. Press [5], [0], [6] on the keypad.
   c. Press [Select], until tone can be heard clearly. Eight is the maximum.
   d. Press [Enter].
   e. Press [Stop] repeatedly, until the following message is displayed.



NOTE (RX): SW801, bit 1, must be on to enter service mode with some PWBs.

4. Enter the service mode.
   a. Press [Function Menu].
   b. Press [*] on the keypad three times.
   c. Press [Stop].
   d. Display indicates:



5. Print the Service parameter list.
   Save the report for final actions.
   a. Press [2] on the keypad.
   b. Press [Enter].
   c. Press [Start/Copy].
   d. Press [Stop], after printing the list.

6. If the monitor option is OFF, use the following steps to set the monitor to ALL or A-B.
   a. Press [1] on the keypad.
   b. Press [Enter].
   c. Press [1], [2], [7] on the keypad.
   d. Press [Select], until A-B or ALL is displayed.
   e. Press [Enter].

7. Exit the Service mode.
   a. Press [Stop], until the following message is displayed.

```
LOAD ORIGINALS
01-31-91 10:45A  M00%
```

7018 / 7019 Off-Line System Checks

Initial conditions

Ensure that these conditions exist:

- Look for any obvious problems such as a recording paper jam, original document jam, telephone/data cable loose or connected wrong at the terminal jacks or wall jack.
- Ensure that the handset is on the handset cradle. Ensure that the power cord is connected to the terminal and to the wall outlet.
- No documents are loaded in the ADF.
- Covers are latched.
- Consumables are loaded correctly.
- Time/Date are set correctly.
- Option 509 ”Cut Mode” is set to PAGE or BATCH.

Procedure

1. Switch off the power, wait 10 seconds, then switch on the power.
   a. Control panel lights flash on.
   b. Top row of nodes on display flash on.
   Y N
   | Go to RAP 1.

2. After 2 seconds the following information is displayed.

```
LOAD ORIGINALS
01-31-91 10:45A  M00%
```

   Y N
   | Perform Rap 3.

3. Time/Date is still set correctly.
   Y N
   | Perform Rap 19.

4. The recording paper feeds approximately 1.5 inches.
   Y N
   | Perform RAP 7 .

5. Paper is cut smoothly and square with the opposite edge of the paper.
   Y N
   | Perform RAP 4.

NOTE: If keys do not function properly at any time during remainder of test, perform RAP 12.

NOTE (RX): SW801, bit 1 must be on to enter service mode with some PWBs.

6. Enter the Service mode.
   a. Press [Function Menu].
   b. Press * on the keypad three times.
   c. Press [Stop].
   d. Display indicates:

```
SERVICE FUNCTIONS
[MENU] OR [1]-[5]
```

7. Print an internal test pattern.
   a. Press [2] on the keypad.
   b. Press [Enter].
   c. Press [Function/Menu].
   d. Press [Start/Copy].

8. The paper feeds completely out of the terminal.
   Y N
   | Perform Rap 7.

9. The copy quality of the test pattern is acceptable. (Reference section 3 for examples of the test pattern).
   Y N
   | Perform Rap 8.

5. Print the Service parameter list.
   Save the report for final actions.
   a. Press [2] on the keypad.
   b. Press [Enter].
   c. Press [Start/Copy].
   d. Press [Stop], after printing the list.

6. If the monitor option is OFF, use the following steps to set the monitor to ALL or A-B.
   a. Press [1] on the keypad.
   b. Press [Enter].
   c. Press [1], [2], [7] on the keypad.
   d. Press [Select], until A-B or ALL is displayed.
   e. Press [Enter].

7. Exit the Service mode.
   a. Press [Stop], until the following message is displayed.

```
LOAD ORIGINALS
01-31-91 10:45A  M00%
```

7018 / 7019 Off-Line System Checks

Initial conditions

Ensure that these conditions exist:

- Look for any obvious problems such as a recording paper jam, original document jam, telephone/data cable loose or connected wrong at the terminal jacks or wall jack.
- Ensure that the handset is on the handset cradle. Ensure that the power cord is connected to the terminal and to the wall outlet.
- No documents are loaded in the ADF.
- Covers are latched.
- Consumables are loaded correctly.
- Time/Date are set correctly.
- Option 509 ”Cut Mode” is set to PAGE or BATCH.

Procedure

1. Switch off the power, wait 10 seconds, then switch on the power.
   a. Control panel lights flash on.
   b. Top row of nodes on display flash on.
   Y N
   | Go to RAP 1.

2. After 2 seconds the following information is displayed.

```
LOAD ORIGINALS
01-31-91 10:45A  M00%
```

   Y N
   | Perform Rap 3.

3. Time/Date is still set correctly.
   Y N
   | Perform Rap 19.

4. The recording paper feeds approximately 1.5 inches.
   Y N
   | Perform RAP 7 .

5. Paper is cut smoothly and square with the opposite edge of the paper.
   Y N
   | Perform RAP 4.

NOTE: If keys do not function properly at any time during remainder of test, perform RAP 12.

NOTE (RX): SW801, bit 1 must be on to enter service mode with some PWBs.

6. Enter the Service mode.
   a. Press [Function Menu].
   b. Press * on the keypad three times.
   c. Press [Stop].
   d. Display indicates:

```
SERVICE FUNCTIONS
[MENU] OR [1]-[5]
```

7. Print an internal test pattern.
   a. Press [2] on the keypad.
   b. Press [Enter].
   c. Press [Function/Menu].
   d. Press [Start/Copy].

8. The paper feeds completely out of the terminal.
   Y N
   | Perform Rap 7.

9. The copy quality of the test pattern is acceptable. (Reference section 3 for examples of the test pattern).
   Y N
   | Perform Rap 8.

10. Press [Stop] and the display indicates:

```
SERVICE FUNCTIONS
[MENU] OR [1]-[5]
```

NOTE: When performing Service diagnostics, step 11, the terminal will sequence through the tests listed and print a test report. The report will indicate the status of the ROM and the RAM tests, the SW801 settings, and the firmware level.

11. Perform Service diagnostics.
    a. Press [3] on the keypad.
    b. Press [Enter] twice.
       - *LEDs flash in sequence.*
       - *Display; all characters in ROM.*
       - *ROM test.*
       - *RAM test.*
       - *Test report is printed.*
12. All Service diagnostics tests are OK.
    Y N
    | Perform RAP 5.
13. Exit service mode.
    a. Press [Stop], until the following message is indicated.

```
LOAD ORIGINALS
01-31-91 10:45A     M00%
```

14. Load a document in the ADF. Document advances into the ADF.
    Y N
    | Perform Rap 7.
15. Document stops after advancing 3 1/2 inches.
    Y N
    | Perform Rap 11.
16. The following message is displayed.

```
DIAL NO. TO SEND OR
PUSH [START] TO COPY
```

    Y N
    | Perform Rap 7.
17. Scan motor noise is normal (No excessive noise).
    Y N
    | Perform Rap 6.
18. Perform a copy operation.
    a. Press [Start/Copy].

    The following information is displayed.

```
COPYING      #1
01-31-91 10:45A
```

    Y N
    | Perform Rap 9.
19. No scan errors occur.
    Y N
    | Perform RAP 9.
20. Printer operates without excessive motor noise during the print operation.
    Y N
    | Perform Rap 6.
21. Copy quality is acceptable. (Reference section 3 for examples).
    Y N
    | Perform Rap 9.
22. Press [Stop], a beep is heard.
    Y N
    | Perform Rap 12.
23. Open the scanner cover. The following information is displayed.

```
CLOSE SCANNER COVER
 01-31-91 10:45A    M00%
```

    Y N
    | Perform Rap 10.
24. Close the scanner cover. Open the printer cover. The following information is displayed.

```
CLOSE PRINTER COVER
 LOAD ORIGINALS M00%
```

    Y N
    | Perform Rap 10.
25. Close the printer cover. Perform “On line check“.

7018 / 7019 On-Line System Checks

NOTE: Perform this check only after the Off Line System Check has been performed.

NOTE: If Send Confirm is on, a confirmation report will print.

1. Using the control panel keypad to dial. Perform a send operation to a known good G3 facsimile terminal that is set to auto. The dial tone is heard when the terminal goes On-Line. (Service option 127 must not be set to Off).
   Y N
   | Perform Rap 14.
2. Dialing completes successfully.
   Y N
   | Replace the (LCU) coupler PWB (REP 4.3) .
3. Terminal initially attempts to transmit at 9600 bps. The display indicates:

NOTE: Service option 107 must be set at 96.

SENDING 96 #1 2145551111

   Y N
   | Replace the main PWB.
4. After completion of the send operation, the display indicates:

COMPLETED

   Y N
   | Perform Rap 16.
5. The image quality received at the remote terminal is acceptable. (Image quality acceptance is determined by the remote operator).
   Y N
   | Perform Rap 18.
6. Call the terminal from another telephone. The following is displayed.

INCOMING CALL LOAD ORIGINALS M00%

   The terminal answers with a ready tone and the display indicates the following until the terminal times out:

RECEIVING

   Y N
   | Perform Rap 15.
7. Perform a receive operation. The terminal initially attempts to receive at 9600 bps. The display indicates:

NOTE: Service option 108 must be set at 96.

RECEIVING 96 #1 2145551111

   Y N
   | Replace the main PWB.
8. After completion of the receive operation, the display indicates:

COMPLETED

   Y N
   | Perform Rap 16.
9. The image quality is acceptable.
   Y N
   | Perform Rap 18.
10. Using the handset on the terminal, call a remote location.
    a. Dial tone is heard.
    b. Dialing completes successfully.
    Y N
    | Perform Rap 14.
11. Customer problem has been resolved.
    Y N
    | Refer to table 1 to select the appropriate Additional checks.
12. Go to Final Action.

Additional Checks

Table 1. Additional checks

Function / check	Additional Check Location
Tone Send	Section 6, Diagnostic procedures
S/W Alarm	Section 6, Diagnostic procedures
Scan Motor	Section 6, Diagnostic procedures
Print Motor	Section 6, Diagnostic procedures
LCD/LED Test	Section 6, Diagnostic procedures
ROM Test	Section 6, Diagnostic procedures
RAM Test	Section 6, Diagnostic procedures
Sensor Test	Section 6, Diagnostic procedures
Test Pattern	Section 3

*NOTE: [Function/Menu], *, *, *, [Stop] to enter service mode and pressing [Stop] three times to exit service mode.*

Final Actions

1. Enter the service mode.
   a. Press [Function/Menu].
   b. Press * on the keypad three times.
   c. Press [Stop].
2. Refer to the Service Mode Options Report and the Service Parameter list printed during Prepare for System Checks (if available), and ensure the present configuration agrees with the original customer configuration.
3. Exit service mode.
   a. Press [Stop] until **LOAD ORIGINALS** is displayed.
4. Verify correct operation of terminal.
5. Replace and clean all covers removed during the Service Call.
6. Complete all required administrative tasks.

2. Status Indicator Repair Analysis Procedures

2. Status Indicator Repair Analysis Procedures

Section Contents

Introduction

The Repair Analysis Procedures section is used to isolate an identified problem to a faulty component or subassembly. It contains this Introduction, Error Code/messages tables and the Repair Analysis Procedures (RAPs).

The Error Messages table includes all operator messages indicated in the display along with their meaning. The Error Code table will also list the Transmit and Receive error codes and associated messages. All error codes will be logged in the Activity report and in the failure report.

Use the error messages or error codes tables when error messages are displayed or error codes are printed in the activity report/failure report.

The Repair Analysis Procedures (RAPs) are entered from Section 1, system checks or Additional Checks. There are two types of RAPs: Status Indicator (SI) RAPs, contained in this section, and Image Quality (IQ) RAPs, located in Section 3.

RAPs provide direction based on information that enabled you to reach that action. RAPs will normally isolate a problem to a specific component or subassembly, excluding the wire harnesses. References to section 7 are provided in the RAPs when appropriate.

In the Y/N (Yes/No) steps of the RAPs, a Yes response will lead you to the next step. A No response will indicate a corrective action, or will direct you to another step. When the indicated corrective action has been completed, go to Section 1 and restart the 7018 / 7019 System Check to verify that the problem has been corrected.

Test Points

All test points (TP) are located on the main PWB. The 7018 / 7019 terminal logic ground is not connected to frame ground. Due to this condition all circuit troubleshooting must be performed using TP803 as the ground point. If more information is needed to locate connectors or test points, please refer to section 7.

Table 1. Error messages

Display messages	Description	Procedures
ADD PAPER	Recording paper depleted.	Replace the recording paper.
CLOSE SCANNER COVER	Scanner cover is open.	Close scanner cover.
CLOSE PRINTER COVER	Printer cover is open.	Close printer cover.
COMM. ERROR (with error code)	Communication error occurred during the terminal operation.	Refer to error codes (Table 2) for more details. Press [STOP] to clear remaining code.
COMPATIBILITY ERROR	Compatibility error occurred during the terminal operation.	Refer to error codes (Table 2) for more details. Press [STOP] to clear remaining code.
CLEAR SCANNER JAM	Document jam in scanner area or ADF misfeed.	Clear jam condition. Clean scanner area.
SYSTEM ERR (#1- 6)	Internal error has occurred.	Turn terminal off for 10 seconds, then reapply power. If displayed message is still present, perform level 1.
CLEAR PRINTER JAM	Recording paper is jammed in printer area.	Clear jam condition and clean printer area. Perform level 1.
NO CONNECTION	No line connection.	Try again - Check telephone line connection.
NO ANSWER	Remote terminal does not answer.	Try again - Check with the remote operator.
OFF - HOOK	Handset is in the off - hook state.	Replace handset.
MEMORY FULL	Internal memory is full.	Print out documents stored in memory. Sort documents into small batches. Repeat operation.
SCANNER NG	Scanner (CIS) problem.	Turn terminal off for 10 seconds, then reapply power. Perform level 1.
HEAD OVERHEAT	Thermal head is overheated.	Turn terminal off until terminal has cooled. Perform level 1.
CUTTER ERROR	Cutter problem.	Turn terminal off for 10 seconds, then reapply power. Perform level 1.

Table 2. Error codes

Error codes	Description	Procedures
E000 E001 E002 E003 E004 E005 E006 E007 E008 E009 E010 E011	An error occurred during document feed. Document too long during memory store. Document too long during ADF transmission. 8 minutes over. Scanner cover open during transmission. Reserved Reserved Reserved Reserved Reserved Jamming on receiver. Printer cover opened during a receive operation.	Mechanical error. Perform “Off Line Check”.
E050 E051 E052	No answer Redial over with no answer Redial over with busy tone detection	Dialing error. Perform “On Line Check”.
E100 E101 E102 E103 E104 E105 E106 E107 E150 E151 E152 E153 E154 E155 E156	T1 time out (no DIS). No response for 3rd NSS/DCS. FTT for TCF with 2400 bps. DCN received at phase B”. Invalid command received at phase B. No response for 3rd post message. Invalid command received at phase D. RTN received. Remote G2 (T1 over with GI). Secure send - non-compatible receiver/incorrect password. Confidential send - non compatible receiver. Confidential send - remote memory full. Relay send - non compatible receiver. Relay send - remote memory full. Secure poll - non-compatible receiver/incorrect password.	Transmit error. Perform “On Line Check”.

Table 2. Continued

Error codes	Description	Procedures
E210	T1 time out (No DCS).	Receive error. Perform “On Line Check”.
E211	No command after CFR/FTT.	
E212	No picture after CFR.	
E213	Invalid command at phase B.	
E214	DCN received at phase B.	
E215	RTN error.	
E216	Carrier lost at phase C.	
E217	EOL - time over.	
E218	No command at phase D.	
E219	Invalid command at phase D.	
E220	DCN received at phase D.	
E221	Memory full during confidential reception.	
E222	Memory full during relay request reception.	
E223	Memory full during memory reception for no paper.	
E250	Secure reception from a non-compatible transmitter/Incorrect password.	
E252	Unauthorized relay request.	

RAP 1 Power Supply Check

Procedure

WARNING

Improper connection of the grounding conductor can result in the risk of electrical shock. The following must be observed:

- **Never use a ground adapter plug to connect the terminal to a power source which does not have a ground connection.**
- **Never attempt any maintenance function which is not specifically called out in the service procedures.**
- **Never remove any covers which are fastened with screws, unless so instructed in the service procedures.**

CAUTION

If any of the voltage measurements are not as specified in the following steps, the cause must be corrected. Caution the customer not to connect the terminal to the wall outlet. Advise the customer that a licensed electrician must correct the wiring. Do not attempt to correct the wiring yourself. If you later find the condition has not been corrected, inform your manager in writing of the improper wiring.

1. Perform the following line voltage check.
   a. Disconnect power cord from the wall outlet.
   b. **USO only** (Figure 1). Perform the following:
      - Measure the AC voltage between AC Hot and Neutral. Meter = 104 to 127 VAC.
      - Measure the AC voltage between the AC Neutral and GND. Meter = less than 3 VAC.

      RX, UK Only (Figure 2). Perform the following:
      - Measure the AC voltage between live and Neutral. Meter = 216 to 264 VAC.
      - Measure the AC voltage between Neutral and Earth. Meter = less than 3 VAC.

      RX, Europe Only (Figure 3). Perform the following:
      - Measure the AC voltage between supply pins. Meter = 196 to 244 VAC.
      - Measure the AC voltage between one supply pin and earth. Meter = 196 to 244 VAC.
      - Measure the AC voltage between second supply pin and earth. Meter = 3 VAC or less.

      Voltages are correct.
      Y N
      | Inform customer of insufficient voltage (or improper wiring).

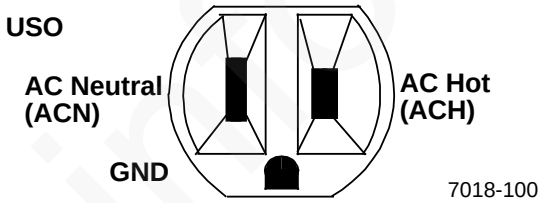


Figure 1. USO Wall Outlet

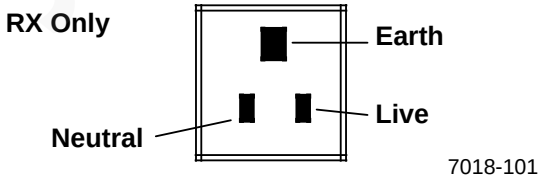


Figure 2. RX UK Wall Outlet

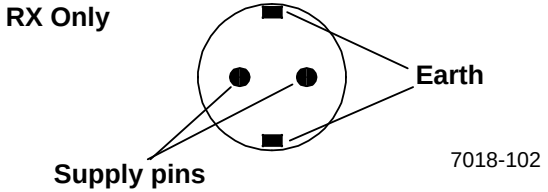


Figure 3. RX Europe Wall Outlet

2. Remove the power cord from terminal, and check continuity through all connections of power cord. Meter reads less than 10 ohms for each connection.
   Y N
   | Replace power cord.

3. Prepare for voltage check.
   a. Remove the bottom cover (REP 1.4).
   b. Ensure that the scan and printer covers are closed properly.

4. Measure voltages at CN808 to TP803 at the following locations.
   - Pin 3. +5VDC
   - Pin 4. +5VDC
   - Pin 6. +12VDC
   - Pin 8. - 12VDC
   - Pin 11. +24VDC

   All voltages measure correctly.
   Y N
   | Go to step 6.

5. Ensure that connector CN805 is properly connected. Replace the following parts in the order listed.
   • control panel (REP 1.1).
   • main PWB (REP 4.1).

6. Switch off the power. Disconnect CN808 from the main PWB. Place a shorting jumper between CN808, pin 7 and frame ground.

7. Measure voltages at CN808 to TP803 (gnd) at the following locations.
   - Pin 3. +5VDC
   - Pin 4. +5VDC
   - Pin 6. +12VDC
   - Pin 8. - 12VDC
   - Pin 11. +24VDC

   All voltages measure correctly.
   Y N
   | Go to step 9.

8. Reconnect CN808. Perform RAP 2.

9. Check fuse with a volt/ohm meter.
   • Fuse is good.
   Y N
   | Replace fuse (REP 4.6).

10. Replace the power supply (REP 4.5).

RAP 2DC Short Circuit Isolation

1. Switch off the power. Disconnect CN801, CN802, CN803, CN804, CN805 and CN807 from the main PWB. Switch on the power.

2. Measure voltages at CN808 to TP803 (gnd) at the following locations.
   - Pin 3. +5VDC
   - Pin 4. +5VDC
   - Pin 6. +12VDC
   - Pin 8. - 12VDC
   - Pin 11. +24VDC

   All voltages measure correctly.
   Y N
   | Replace the main PWB. (REP 4.1).

3. Switch off the power. Reconnect CN801. Switch on the power.

4. Measure voltages at CN808 to TP803 (gnd) at the following locations.
   - Pin 3. +5VDC
   - Pin 4. +5VDC
   - Pin 6. +12VDC
   - Pin 8. - 12VDC
   - Pin 11. +24VDC

   All voltages measure correctly.
   Y N
   | Replace the (CIS) contact image sensor (REP 2.10).

5. Switch off the power. Reconnect CN802 Switch on the power.

6. Measure voltages at CN808 to TP803 (Gnd) at the following locations.
   - Pin 3. +5VDC
   - Pin 4. +5VDC
   - Pin 6. +12VDC
   - Pin 8. - 12VDC
   - Pin 11. +24VDC

   All voltages measure correctly.
   Y N
   | Replace the scan motor (REP 2.9).

2. Remove the power cord from terminal, and check continuity through all connections of power cord. Meter reads less than 10 ohms for each connection.
   Y N
   | Replace power cord.

3. Prepare for voltage check.
   a. Remove the bottom cover (REP 1.4).
   b. Ensure that the scan and printer covers are closed properly.

4. Measure voltages at CN808 to TP803 at the following locations.
   - Pin 3. +5VDC
   - Pin 4. +5VDC
   - Pin 6. +12VDC
   - Pin 8. - 12VDC
   - Pin 11. +24VDC

   All voltages measure correctly.
   Y N
   | Go to step 6.

5. Ensure that connector CN805 is properly connected. Replace the following parts in the order listed.
   • control panel (REP 1.1).
   • main PWB (REP 4.1).

6. Switch off the power. Disconnect CN808 from the main PWB. Place a shorting jumper between CN808, pin 7 and frame ground.

7. Measure voltages at CN808 to TP803 (gnd) at the following locations.
   - Pin 3. +5VDC
   - Pin 4. +5VDC
   - Pin 6. +12VDC
   - Pin 8. - 12VDC
   - Pin 11. +24VDC

   All voltages measure correctly.
   Y N
   | Go to step 9.

8. Reconnect CN808. Perform RAP 2.

9. Check fuse with a volt/ohm meter.
   • Fuse is good.
   Y N
   | Replace fuse (REP 4.6).

10. Replace the power supply (REP 4.5).

RAP 2DC Short Circuit Isolation

1. Switch off the power. Disconnect CN801, CN802, CN803, CN804, CN805 and CN807 from the main PWB. Switch on the power.

2. Measure voltages at CN808 to TP803 (gnd) at the following locations.
   - Pin 3. +5VDC
   - Pin 4. +5VDC
   - Pin 6. +12VDC
   - Pin 8. - 12VDC
   - Pin 11. +24VDC

   All voltages measure correctly.
   Y N
   | Replace the main PWB. (REP 4.1).

3. Switch off the power. Reconnect CN801. Switch on the power.

4. Measure voltages at CN808 to TP803 (gnd) at the following locations.
   - Pin 3. +5VDC
   - Pin 4. +5VDC
   - Pin 6. +12VDC
   - Pin 8. - 12VDC
   - Pin 11. +24VDC

   All voltages measure correctly.
   Y N
   | Replace the (CIS) contact image sensor (REP 2.10).

5. Switch off the power. Reconnect CN802 Switch on the power.

6. Measure voltages at CN808 to TP803 (Gnd) at the following locations.
   - Pin 3. +5VDC
   - Pin 4. +5VDC
   - Pin 6. +12VDC
   - Pin 8. - 12VDC
   - Pin 11. +24VDC

   All voltages measure correctly.
   Y N
   | Replace the scan motor (REP 2.9).

7. Switch off the power. Reconnect CN803 Switch on the power.

8. Measure voltages at CN808 to TP803 at the following locations.
   - Pin 3. +5VDC
   - Pin 4. +5VDC
   - Pin 6. +12VDC
   - Pin 8. - 12VDC
   - Pin 11. +24VDC

   All voltages measure correctly.

   Y N
   | Replace the thermal head (REP 3.1).

9. Switch off the power. Reconnect CN804. Switch on the power.

10. Measure voltages at CN808 to TP803 at the following locations.
    - Pin 3. +5VDC
    - Pin 4. +5VDC
    - Pin 6. +12VDC
    - Pin 8. - 12VDC
    - Pin 11. +24VDC

    All voltages measure correctly.

    Y N
    | Go to step 16.

11. Switch off the power. Reconnect CN805. Switch on the power.

12. Measure voltages at CN808 to TP803 at the following locations.
    - Pin 3. +5VDC
    - Pin 4. +5VDC
    - Pin 6. +12VDC
    - Pin 8. - 12VDC
    - Pin 11. +24VDC

    • All voltages measure correctly.

    Y N
    | Go to step 18.

13. Switch off the power. Reconnect CN807. Switch on the power.

14. Measure voltages at CN808 to TP803 at the following locations.
    - Pin 3. +5VDC
    - Pin 4. +5VDC
    - Pin 6. +12VDC
    - Pin 8. - 12VDC
    - Pin 11. +24VDC

    All voltages measure correctly.

    Y N
    | Go to step 20.

15. Return to procedure which directed you to this test , or go to final actions.

16. Perform the following:
    a. Switch off the power.
    b. Disconnect the following connectors in step d. from the paper sensor PWB one at a time. Switch on the power.

NOTE: To gain access to the low paper sensor and PWB disconnect CN205 from the (LCU) coupler PWB and remove the the screws securing the coupler PWB to the frame. Be sure to reconnect CN205 before measuring voltages.

    c. Measure voltages at CN808 to TP803 (gnd) at the following locations.
       - Pin 3. +5VDC
       - Pin 4. +5VDC
       - Pin 6. +12VDC
       - Pin 8. - 12VDC
       - Pin 11. +24VDC

    d. When the voltages measure correctly, replace the last component removed.
       - CN702 paper cutter (REP 3.7)
       - CN703 print motor (REP 3.3)
       - CN704 paper jam sensor (REP 3.6)
       - CN705 printer interlock (REP 3.4)

       • Problem has been resolved.

       Y N
       | Replace paper sensor PWB (REP 3.5).

17. Return to procedure which directed you to this test , or go to final actions.

18. Perform the following:
    a. Switch off the power.
    b. Remove the front cover (REP 1.2).
    c. Disconnect the following connectors in step e. from the control panel PWB one at a time. Switch on the power.
    d. Measure voltages at CN808 to TP803 at the following locations.
       - Pin 3. +5VDC
       - Pin 4. +5VDC
       - Pin 6. +12VDC
       - Pin 8. - 12VDC
       - Pin 11. +24VDC

    e. When the voltages measure correctly, replace the last component removed.
       - CN502 scanner Interlock (REP 2.3).
       - CN504 document sensor (REP 2.2).
       - CN505 scan sensor (REP 2.4).

       • Problem has been resolved.

       Y N
       | Replace control panel assembly (REP 1.1).

19. Return to procedure which directed you to this test , or go to final actions.

20. a. Switch off the power.
    b. Disconnect CN201 from the (LCU) coupler PWB.

21. Measure voltages at CN808 to TP803 at the following locations.
    - Pin 3. +5VDC
    - Pin 4. +5VDC
    - Pin 6. +12VDC
    - Pin 8. -12VDC
    - Pin 11. +24VDC

    All voltages measure correctly.

    Y N
    | Replace the (LCU) coupler PWB (REP 4.3).

    Replace the speaker (REP 4.4).

RAP 3 Incorrect Display Message

Procedure

1. Does machine appear to have power applied.
   Y N
   | Perform RAP 1.
2. Display message is blank, faded, irregular wording, partially missing characters or solid black bars.
   Y N
   | Go to step 4.
3. Replace the following parts in the order listed.
   - main PWB (REP 4.1).
   - control panel assembly (REP 1.1).
4. Display indicates: DIAL NO. TO SEND OR PUSH [START] TO COPY.
   Y N
   | Go to Step 6.
5. Perform RAP 7.
6. Display indicates: CLEAR SCANNER JAM.
   Y N
   | Go to Step 8.
7. Perform RAP 7.
8. Display indicates: CLEAR PRINTER JAM.
   Y N
   | Go to Step 10.
9. Perform RAP 7.
10. Display indicates: ADD PAPER.
    Y N
    | Go to step 12.
11. Perform RAP 13.
12. Display indicates: CLOSE SCANNER COVER.
    Y N
    | Go to step 14.
13. Perform Rap 10.
14. Display indicates: CLOSE PRINTER COVER.
    Y N
    | Go to step 16.
15. Perform Rap 10.
16. Display indicates: SCANNER ERROR.
    Y N
    | Go to step 18.
17. Perform Rap 9.
18. Display indicates: CUTTER ERROR.
    Y N
    | Return to procedure which directed you to this RAP or go to final actions.
19. Perform Rap 4.

RAP 4 Cutter Error / No Cutter Operation

Procedure

1. Menu 509 “Cut Mode” is set to ”Page“ or “Batch”.
   Y N
   | Set to ”Page“ or ”Batch“.
2. Measure voltage at CN702, pin 5 to TP803 (Gnd).
   • Voltage measures greater than +5V.
   Y N
   | Perform RAP 1, starting at step 4.
3. Connectors CN701, CN702 and CN804 are connected properly.
   Y N
   | Connect properly.
4. Check cutter assembly for mechanical binding.
   a. Remove the top cover (REP 1.3).
   b. Manually move the cutter roller back and forward.
   • Cutter assembly is free of mechanical binding.
   Y N
   | Repair binding problem or go to step 5.
5. Replace the following parts in the order listed.
   • paper cutter (REP 3.7).
   • main PWB (REP 4.1).

RAP 5 Service Diagnostics Failure

Procedure

1. All lights flash on in sequence.
   Y N
   | Go to step 6.
2. All Characters in ROM are displayed correctly.
   Y N
   | Replace control panel assembly (REP 1.1).
3. Test status is printed.
   Y N
   | Perform Rap 8.
4. ROM/RAM status indicates OK.
   Y N
   | Go to step 7.
5. Return to procedure which directed you to this test , or go to final actions.
6. Replace the following parts in the order listed.
   • control panel assembly (REP 1.1).
   • main PWB (REP 4.1).
7. Replace the following parts in the order listed.
   • EPROMS (REP 4.2).
   • main PWB (REP 4.1).

RAP 6 Excessive Motor Noise

Procedure

1. RAP 17 has been checked.
   Y N
   | Perform RAP 17.
2. Noise is present during scan operation.
   Y N
   | Go to step 4.
3. Replace the following parts in the order listed.
   • main PWB (REP 4.1).
   • scan motor (REP 2.9).
4. Noise is present at start of the paper feed operation.
   Y N
   | Go to step 6.
5. Replace the following parts in the order listed.
   • main PWB (REP 4.1).
   • print motor (REP 3.3).
6. Go to final actions.

RAP 7 Document Jam / No Motor Operation

Procedure

1. Problem appears to be electrical (No gear noise, jamming or other mechanical problems).
   Y N
   | Perform RAP 17.
2. Enter Service mode.
   a. Press [Function/Menu].
   b. Press [*] on the keypad three times.
   c. Press [Stop].
3. Perform Sensor test.
   a. Press [3] on the keypad.
   b. Press [Enter].
   c. Press [Menu].
   d. Press [Enter].
   e. Press [Menu] until Sensor test is displayed.
   f. Press [Enter].
4. Display message **CLEAR PRINTER JAM** was the original problem before entering the sensor test.
   Y N
   | Go to step 6.
5. Go to step 11.

NOTE: Reference section 6, Sensor Test if more information is needed to check sensors.

6. Check sensors #1 (document sensor) and #2 (scan sensor).
   • Sensor states change when actuated.
   Y N
   | Replace defective sensor (REP 2.2 / REP 2.4)
7. Remove the bottom cover (REP 1.4).
8. Measure voltage at CN808, pin 11 to TP803 (Gnd).
   Voltage reads greater than +22VDC.
   Y N
   | Perform RAP 1.
9. Measure resistance of the scan motor.
   a. Disconnect the power cord.
   b. Remove the four screws securing the main PWB.
   c. Disconnect CN802 from the main PWB.
   d. Measure resistance of CN802, pin 5 to the following locations.
      - Pin 1
      - Pin 2
      - Pin 3
      - Pin 4
   • Resistance is 75 to 100 ohms.
   Y N
   | Replace the scan motor (REP 2.9).
10. Replace the main PWB (REP 4.1).

NOTE: Reference section 6, Sensor Test if more information is needed to check sensors.

11. Check sensor #5, Jam sensor.
    • Sensor state changes when actuated.
    Y N
    | Replace Jam sensor (REP 3.6).
12. Remove the bottom cover (REP 1.4).
13. Measure voltage at CN808, pin 11 to TP803 (Gnd).
    • Voltage reads greater than +22VDC.
    Y N
    | Perform RAP 1, starting at step 4.
14. Measure resistance of the printer motor.
    a. Disconnect the power cord.
    b. Remove the (LCU) coupler PWB (REP 4.3).
    c. Disconnect CN703 from the paper sensor PWB.
    d. Measure resistance of CN703, pin 5 to the following locations.
       - Pin 1
       - Pin 2
       - Pin 3
       - Pin 4
    • Resistance is 75 to 100 ohms.
    Y N
    | Replace the print motor (REP 3.3).
15. Replace main PWB (REP 4.1).

RAP 8 Report Copy Quality is not Acceptable

Procedure

1. Has RAP 17 been performed.
   Y N
   | Perform RAP 17.
2. Thermal head area is clean.
   Y N
   | Clean thermal head area.
3. Prepare for voltage check.
   a. Remove the bottom cover (REP 1.4).
   b. Ensure that the scan and printer covers are closed properly.
   c. Ensure that power supply connectors CN2 and CN3 are connected properly.
4. Measure voltage at CN808, pin 11 to TP803 (gnd).
   - Pin 11. +24VDC
   • Voltage measures greater than 22VDC.
   Y N
   | Perform RAP 1, starting at step 4.
5. Measure voltage at CN803, pin 4 to TP803 (Gnd).
   • Voltage measures greater than +2.5 VDC.
   Y N
   | Replace thermal head (REP 3.1).
6. Replace main PWB (REP 4.1).

RAP 9 Scanner Error / Copy Quality is not Acceptable

Procedure

1. Has RAP 17 been performed.
   Y N
   | Perform RAP 17.
2. Scanner area is clean.
   Y N
   | Clean scanner area.
3. Connectors CN801 and CN1 are connected properly.
   Y N
   | Connect properly.
4. Prepare for voltage check.
   a. Remove the bottom cover (REP 1.4).
   b. Ensure that the scan and printer covers are closed properly.
   c. Ensure that power supply connectors CN2 and CN3 are connected properly.
5. Measure voltages at CN808 to TP803 at the following locations.
   - Pin 3. +5VDC
   - Pin 4. +5VDC
   - Pin 6. +12VDC
   - Pin 8. - 12VDC
   • All voltages measure correctly.
   Y N
   | Perform RAP 1, starting at step 4.
6. Load a document into the ADF.
7. Measure voltage at TP801 to TP803 (Gnd). Press [Start/Copy].
   • Voltage varies between .1VDC and .3VDC during the copy operation.
   Y N
   | Replace the (CIS) contact image sensor (REP 2.10).
8. Replace the main PWB (REP 4.1).

RAP 10 Cover Interlock Problem

Procedure

1. Enter Service mode.
   a. Press [Function/Menu].
   b. Press [*] on the keypad three times.
   c. Press [Stop].
2. Perform Sensor test.
   a. Press [3] on the keypad.
   b. Press [Enter].
   c. Press [Menu].
   d. Press [Enter].
   e. Press [Menu] until **SENSOR TEST** is displayed.
   f. Press [Enter].
3. Display message **CLOSE SCANNER COVER** was the original problem before entering the sensor test.
   Y N
   | Go to step 6.

NOTE: Reference section 6, Sensor Test if more information is needed to check sensors.

4. Check sensor #3 = scanner Interlock.
   • Sensor state changes when actuated.
   Y N
   | Replace scanner interlock (REP 2.3).
5. Replace main PWB (REP 4.1).
6. Check sensor #8 = printer interlock.
   • Sensor state changes when actuated.
   Y N
   | Replace printer interlock (REP 3.4).
7. Replace main PWB (REP 4.1).

RAP 11 Document does not Stop

Procedure

1. Enter Service mode.
   a. Press [Function/Menu].
   b. Press [*] on the keypad three times.
   c. Press [Stop].
2. Perform Sensor test.
   a. Press [3] on the keypad.
   b. Press [Enter].
   c. Press [Menu].
   d. Press [Enter].
   e. Press [Menu] until **SENSOR TEST** is displayed.
   f. Press [Enter].

NOTE: Reference section 6, Sensor Test, if more information is needed to check sensors.

3. Check sensors #1 (document sensor) and #2 (scan sensor).
   • Sensor states change when actuated.
   Y N
   | Replace defective sensor (REP 2.2 / REP 2.4).
4. Replace the main PWB (REP 4.1).

RAP 12 No Tone Heard or Keys Inoperative

Procedure

1. Enter Service mode.
   a. Press [Function/Menu].
   b. Press [*] on the keypad three times.
   c. Press [Stop].
2. Perform SW/ALARM test.
   a. Press [3] on the keypad.
   b. Press [Enter].
   c. Press [Menu].
   d. Press [Enter].
   e. Press [Menu] until **SW/ALARM** is displayed.
   f. Press [Enter].
   • All keys operate properly, No tone is heard.
   Y N
   | Go to step 5.
3. Perform a continuity check.
   • Disconnect the speaker from the coupler PWB.
   • Meter reads between 6 - 8 ohms.
   Y N
   | Replace the speaker (REP 4.4).
4. Replace parts in the following order listed.
   • main PWB (REP 4.1).
   • LCU (coupler) PWB (REP 4.3).
5. Replace parts in the following order listed.
   • main PWB (REP 4.1).
   • control panel assembly (REP 1.1).

RAP 13 Paper Sensor

Procedure

1. Enter Service mode.
   a. Press [Function/Menu].
   b. Press [*] on the keypad three times.
   c. Press [Stop].
2. Perform Sensor test.
   a. Press [3] on the keypad.
   b. Press [Enter].
   c. Press [Menu].
   d. Press [Enter].
   e. Press [Menu] until **SENSOR TEST** is displayed.
   f. Press [Enter].

NOTE: Reference section 6, Sensor Test, if more information is needed to check sensors.

3. Check sensor #4 = paper sensor.
   • Sensor state changes when actuated.
   Y N
   | Replace paper sensor (REP 3.5).
4. Replace the main PWB (REP 4.1).

RAP 14 No Dial Tone

Procedure

1. Handset and data cable are connected properly.
   Y N
   | Reconnect cables.
2. No problem occurs when dialing from the terminal's keypad.
   Y N
   | Go to step 6.
3. Disconnect the handset and connect another telephone to the terminal. Dial tone is heard when the handset is lifted.
   Y N
   | Go to step 5.
4. Replace the handset.
5. Disconnect the handset from terminal. Disconnect the data cable from the telephone wall jack. Plug the handset into the telephone wall jack. Dial tone is heard.
   Y N
   | Inform Customer of telephone line problem.
6. Reseat connectors, then replace data cable. Problem is resolved.
   Y N
   | Replace the parts in order listed.
   - coupler PWB (REP 4.3).
   - main PWB (REP 4.1).
7. Go to final actions.

RAP 15 The Terminal does not Answer

Procedure

1. Phone rings (but does not answer).
   Y N
   | Go to step 3.

NOTE: Ensure that manual receive is not selected. (RX) Ensure that all user and service options are set correctly for your particular country.

2. Replace the parts in order listed.
   - EPROMs, if below A1-C7 or A2-B1 (REP 4.2).
   - main PWB (REP 4.1).
   - coupler PWB (REP 4.3).
3. Disconnect the handset from the terminal. Disconnect the data cable from the telephone wall jack. Plug the handset into the telephone wall jack. Dial tone is heard.
   Y N
   | Inform Customer of telephone line problem.
4. Reseat connectors, then replace parts in order listed.
   - telephone data cable (PL 4.1).
   - main PWB (REP 4.1).

RAP 16 Transmit and Receive Error codes

Procedure

1. Problem occurs during send operation.
   Y N
   | Go to step 9.
2. Send a three page test document to the TSC unattended support center. Test completes normally without communications code.
   Y N
   | Contact the next level of support for additional assistance.
3. Repeat the three page test with another known good terminal. Test completes normally without error codes.
   Y N
   | Contact the next level of support for additional assistance.
4. Repeat the three page test with the terminal that caused the original problem. Test completes normally without error codes.
   Y N
   | Go to step 6.
5. Go to Final Actions.
6. Repeat the three page test again at 4800 BPS. Test completes normally without communications code.
   Y N
   | Request remote terminal contact service.
7. Problem occurs only during send operation. Test completes normally without communications code.
   Y N
   | Go to step 9.
8. Conditions require slower transmission speed. Inform customer and go to Final Actions.
9. Receive three test copies from the TSC unattended test center without error codes.
   Y N
   | Go to step 13.
10. Repeat the three page test with the terminal that caused the original problem. Test completes normally without communications code.
    Y N
    | Request remote terminal contact service.
11. Problem occurs only when remote terminal initiates the transmission.
    Y N
    | Request remote terminal contact service.
12. Have the remote customer contact the telco vendor.
13. Contact the next level of support for additional assistance or go to final actions.

RAP 17 Mechanical Checkout

Procedure

NOTE: The following checks apply to all gears, pulleys, springs and bearings in these areas:

- *Front and Rear Frames.*
- *Upper and Lower Scanner.*
- *Upper and Lower Printer.*

1. Remove the top cover (REP 1.3).
2. Inspect all shafts. Shafts turn freely.
   Y N
   | Replace shaft and bearings.
3. Inspect all bearings. Bearings are secure on shafts and positioned properly in frame cutouts.
   Y N
   | Position bearings in frame cutouts, replace bearings.
4. Inspect pulleys. Pulleys are secure on shafts and are not broken.
   Y N
   | Replace pulley, E-ring or split washer.
5. Inspect upper scanner. Upper scanner closes and latches.
   Y N
   | Replace latch spring, latches.
6. Inspect upper printer. Upper printer closes and latches.
   Y N
   | Replace latch spring, latches or printer frame.
7. Inspect gears. Gears are secure on shafts and are not broken. Gears mesh properly.
   Y N
   | Tighten set screw in gear or replace gear, E-rings or split washers.
8. Return to procedure which directed you to this RAP or go to Final Actions.

RAP 18 Received Image Quality is Unacceptable

Procedure

1. Establish voice contact using the same telecommunication link as the transmitted document.
   - Line is not noisy and other voice can be heard clearly.

   Y N
   | Go to step 3.
2. Original document is clean and has no deletions.

   Y N
   | Have remote user send a clean document.
3. Have document sent at a slower transmit speed and with fine option selected. Refer to General Procedures for service controlled parameters, if required.
   - Image quality is acceptable.

   Y N
   | Go to step 5.
4. Inform user of required settings.
5. Data cable and telephone line harness are connected properly.

   Y N
   | Reinstall the cable or harness.
6. Verify both terminals and the telecommunication link by transmitting between both terminals and a known good link.
   - Both transmitted documents have acceptable image quality.

   Y N
   | Go to step 8.
7. Have user request that the telephone company verify quality of initial telecommunication link.

NOTE: The following action will reset all selectable options, features, and customer data to their initial default conditions. Be sure to print an activity and a service options report so that the dial directory and other information can be entered again if needed.

If there is any question about the service options being set to default, use Service Options Reset (42) to set the default options. Then send the document again before you perform RAM Clear All procedure. This will retain the original dial directory.

8. Perform a RAM clear all.
   a. Press [Function Menu].
   b. Press * on the keypad three times.
   c. Press [Stop].
   d. Press [4] on the keypad.
   e. Press [Enter].
   f. Press [Function Menu] until **RAM ALL CLEAR** is displayed.
   g. Press [Enter].
9. Have the remote user send documents again.
   - Image quality is acceptable.

   Y N
   | Replace the following parts in the sequence listed. Transmit documents after each action to verify repair.
     - LCU (coupler) PWB (REP 4.3).
     - main PWB (REP 4.1).
10. Improper options had been set on the terminal. Set the options so they match the customers options during the system check. Inform the user of any required changes.

RAP 19 Time/Date Incorrect

Procedure

1. Applied power to the terminal for a minimum of 30 minutes.
2. Set the Time/Date.
3. Switch the off the power, wait 5 seconds, then switch on the power.
4. Time/Date remains set correctly.

   Y N
   | Go to step 6.
5. Go to final actions.
6. Replace the main PWB (REP 4.1).

3. Image Quality Repair Analysis Procedures

3. Image Quality Repair Analysis Procedures

Section Contents

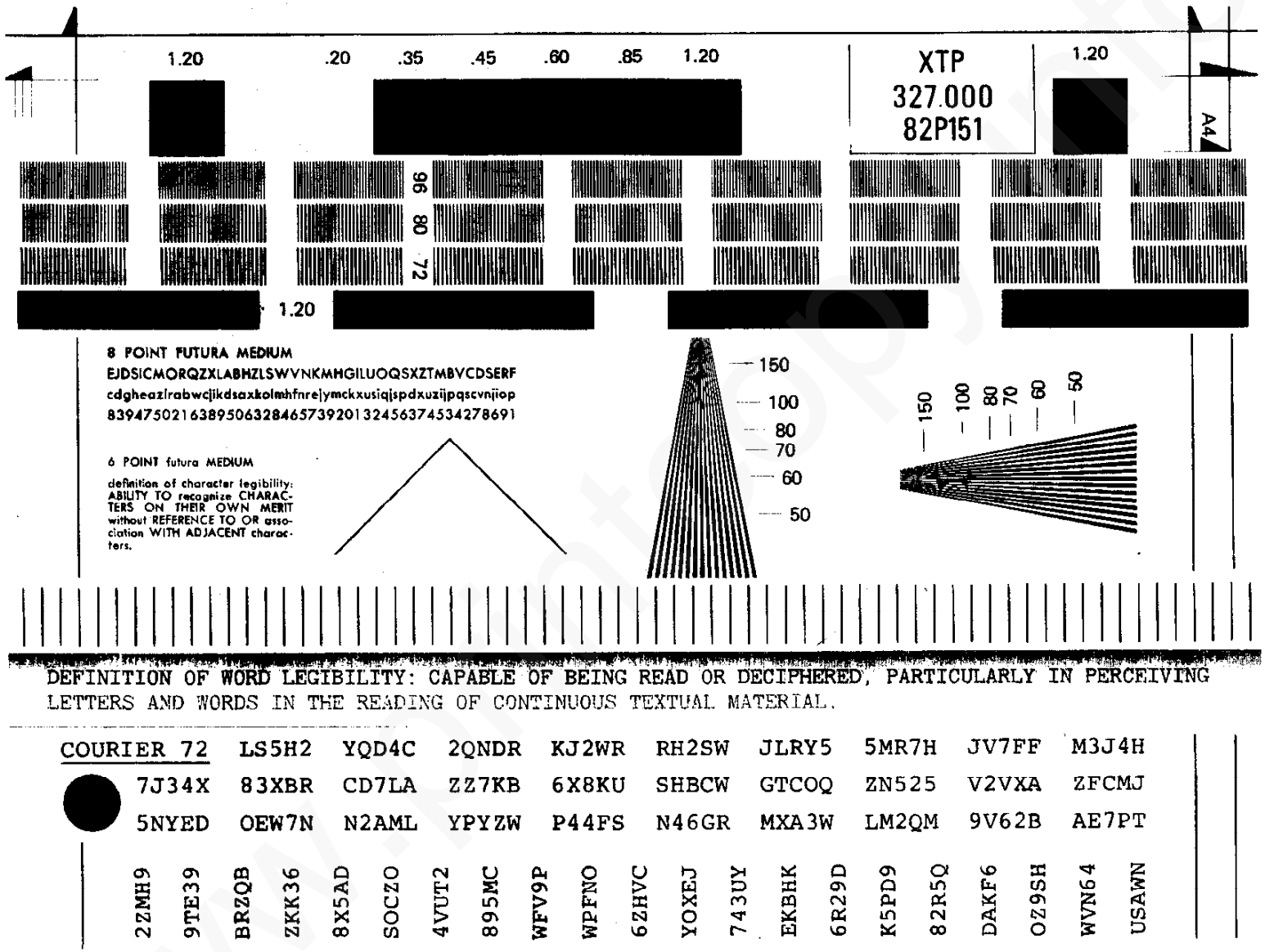
Introduction

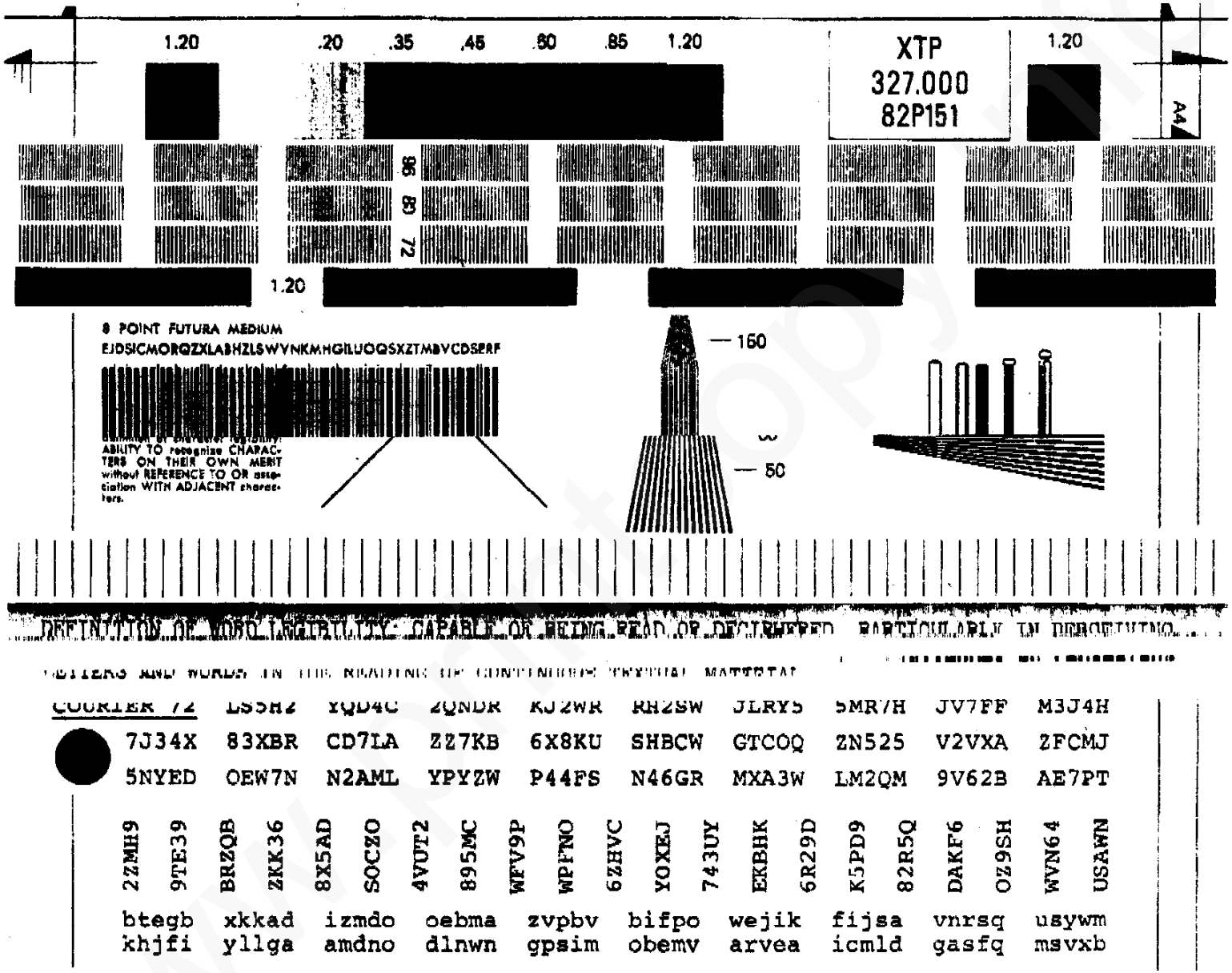
The Image Quality (IQ) section is used to identify quality problem. It contains this Introduction and Image Quality samples.

These samples are reproductions of the Internal test pattern (generated by the terminal) and the test pattern, 82P151 (copied on the terminal). Samples of the telephone line noise and modem noise are also included.

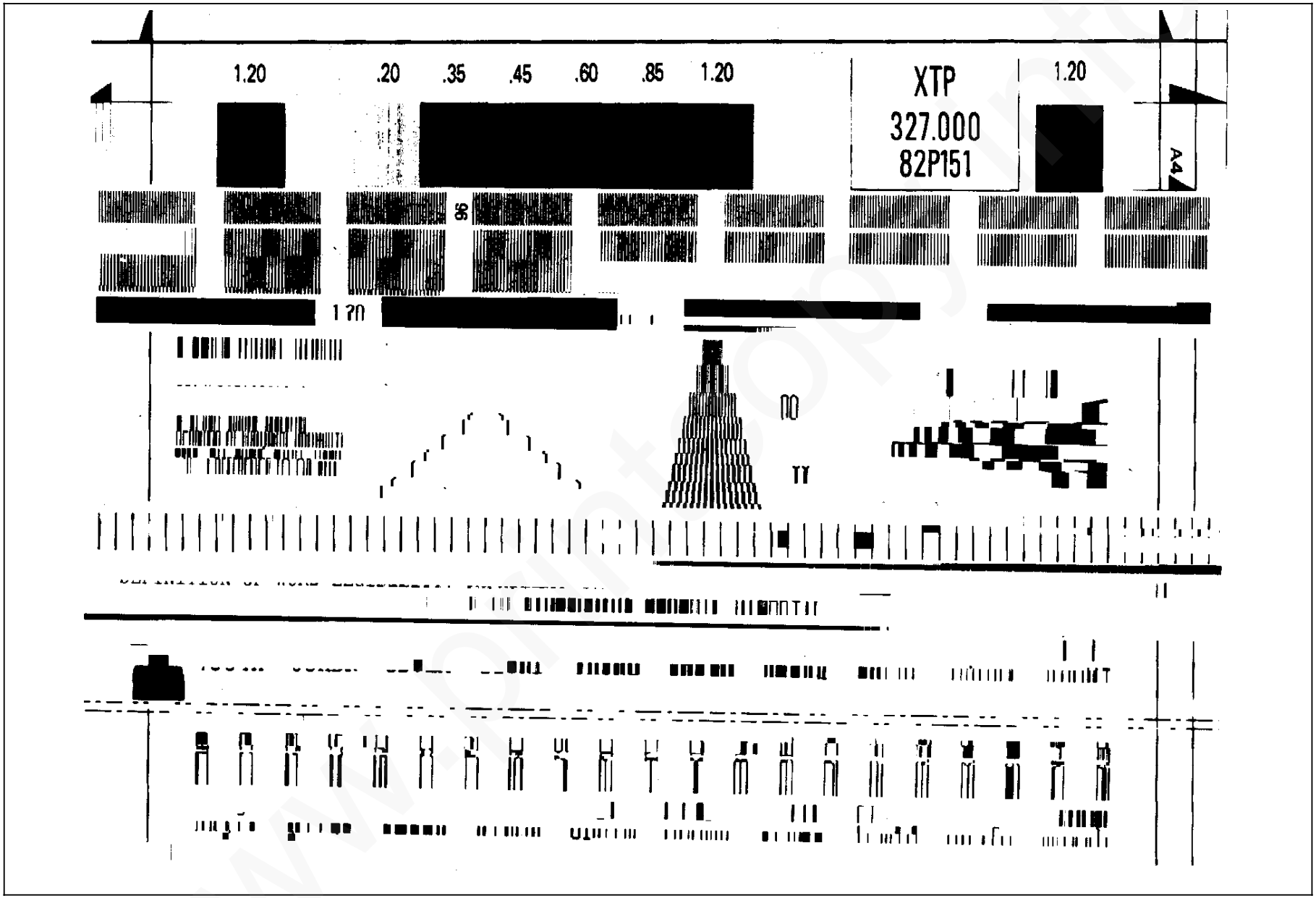
Use the Image Quality Samples as a comparison to identify any image quality defects which may have been produced during System Check.

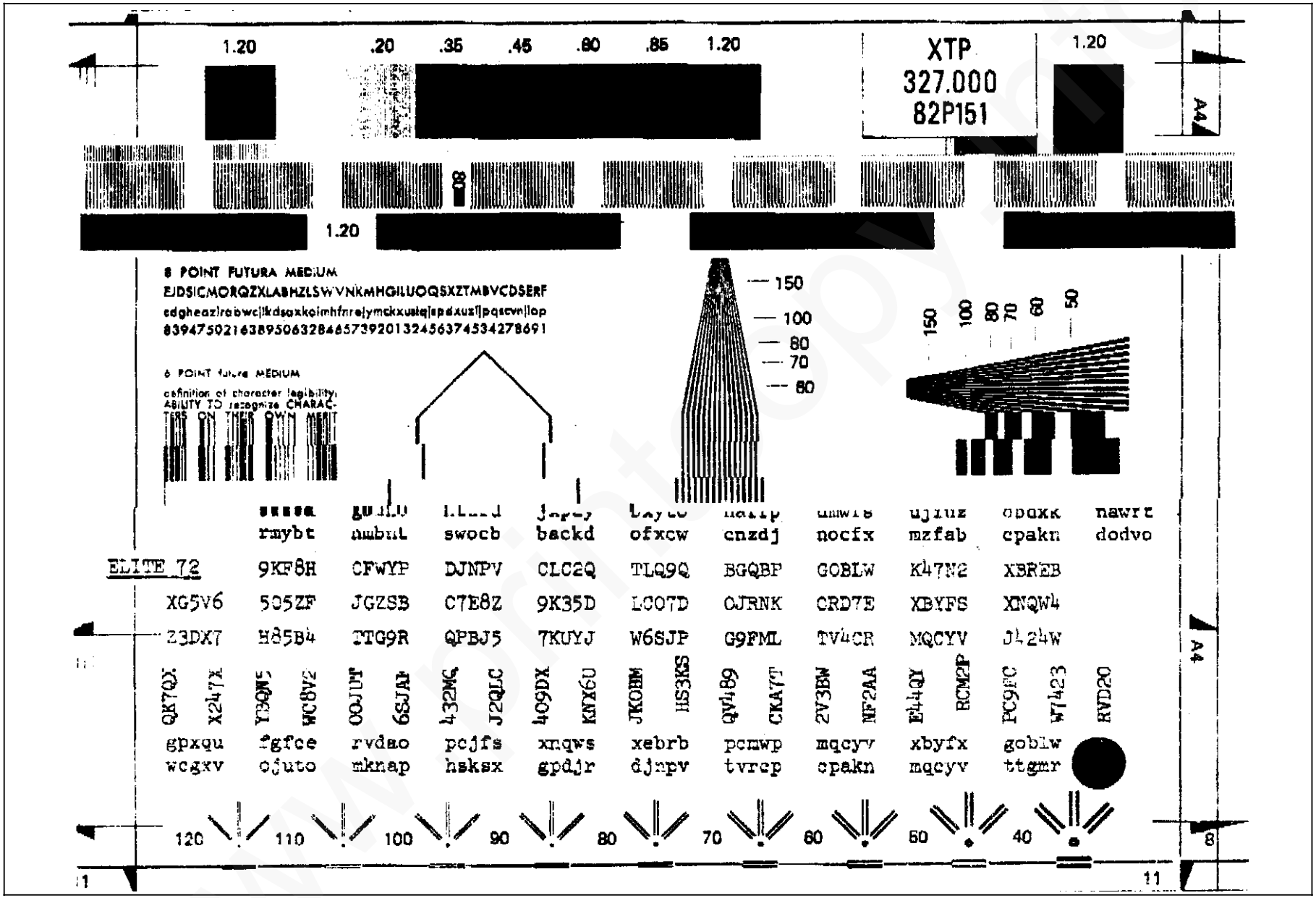
Test Pattern 82P151





Noise on Line, ECM or Non-ECM





4. Repair / Adjustment

Introduction

Organization

The Section Contents gives page references for all procedures in the repair section.

The repair section contains the removal and replacement procedures. If a part procedure cannot be found in this section, it means that removal or replacement is supported by the parts list, or that there is no requirement to remove the part.

Removal

Removal contains step by step removal procedures for a specific part or assembly.

You should refer to the specific parts list illustration (listed under the repair title) for locating most parts within a procedure.

Replacement

Replacement contains procedures to reinstall or replace a part or assembly.

If a replacement can be completed in the exact reverse order of the removal, a generic replacement statement is provided.

If you are in one replacement procedure and are directed to go to another procedure to reinstall a part, reinstall that part then return to the original procedure. The original procedure provides the best sequence for replacing each part removed.

Adjustment

A purpose and a check for each adjustment is listed before the procedure.

REP 1.1 Control Panel Assembly

Parts List on PL 1.1

Removal

CAUTION

Follow electrostatic discharge precautions. Static electricity can damage this part.

1. Disconnect the power cord from the rear of the machine.
2. Open the front cover.
3. Remove two screws (Figure 1) and separate the control panel assembly from the scanner.

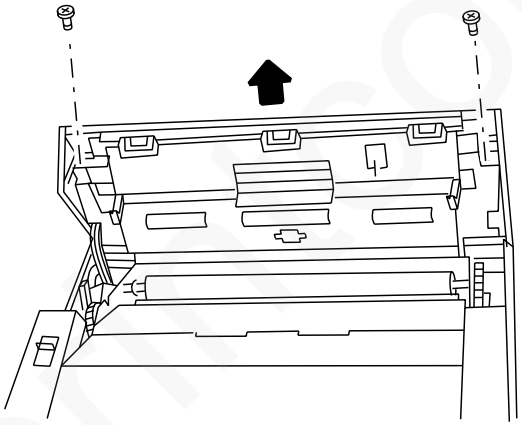


Figure 1. Control panel assembly

4. Disconnect the connectors from the keyboard PWB.

Replacement

CAUTION

Do not pinch wires on R. H. side of upper scanner when reinstalling the assembly.

1. Reinstall in reverse order.

REP 1.2 Front Cover

Parts List on PL 1.1

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove control panel insert.
4. Remove eight screws (Figure 1) retaining the key board PWB.
5. Remove four screws (Figure 1) retaining the display and separate both the PWB and display from the front cover.
6. Remove plastic protector, keypads, rubber actuators and keys.

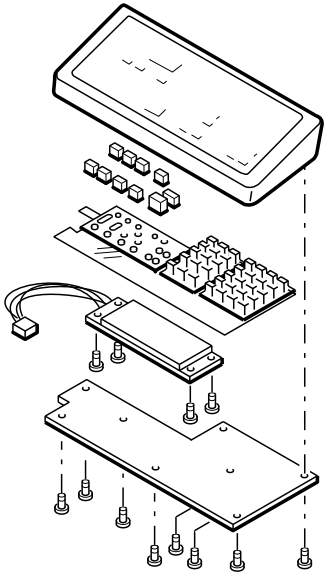


Figure 1. Front cover

Replacement

1. Reinstall in reverse order.

REP 1.3 Top Cover Assembly

Parts List on PL 1.1

Removal

1. Disconnect the power cord from the rear of the machine.
2. Disconnect the telephone cable and telephone line cable.
3. Remove the control panel assembly (REP 1.1).
4. Remove the document tray, output tray, and thermal paper roll.
5. Turn the machine upside down and remove two screws (Figure 1).

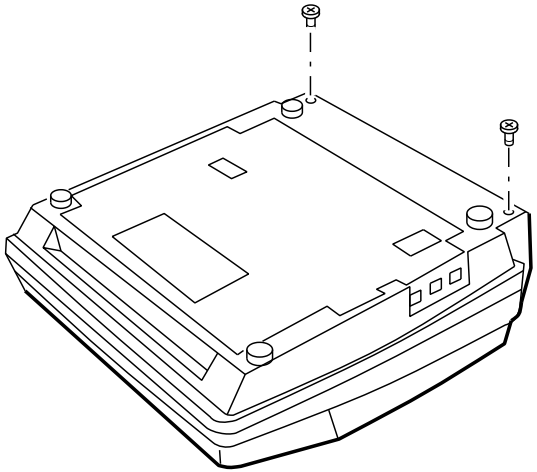


Figure 1. Top cover

6. Turn the machine right side up and remove two screws (Figure 2) retaining the top cover.
7. With the upper scanner and printer cover open, lift the front of the top cover and remove.

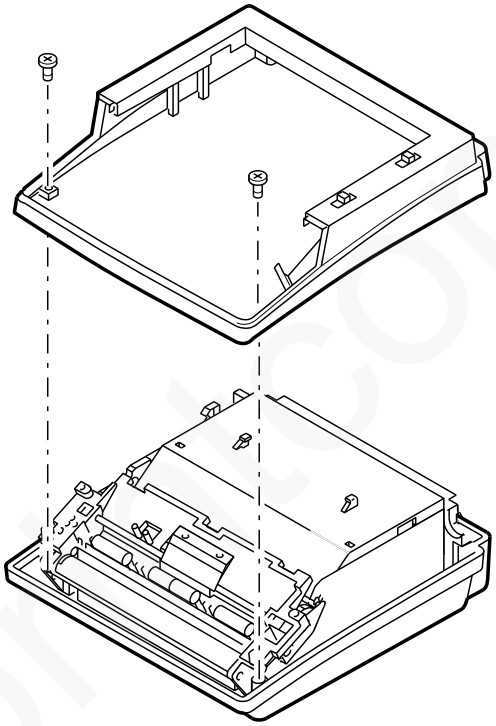


Figure 2. Top Cover

Replacement

1. Reinstall in reverse order

REP 1.4 Bottom Cover

Parts List on PL 1.1

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove the top cover assembly (REP 1.3).
4. Remove the main chassis assembly (REP 4.7).
5. Remove the jack panel.
6. Remove two screws retaining the power supply to the bottom cover.
7. Remove four screws retaining metal pan to bottom cover.
8. Remove two screws retaining the telephone cradle and remove the cradle.

Replacement

NOTE: Ensure ground clip on power supply contacts the bottom metal plate when reinstalled.

1. Reinstall in reverse order.

REP 1.5 Printer Cover

Parts List on PL 1.1

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the document tray.
3. Remove the control panel assembly (REP 1.1).
4. Remove the top cover assembly (REP 1.3).
5. Remove E ring and pin retaining the latch arm PL 1.1, item 15 to the printer cover.
6. Remove one screw and pivot pin retaining the printer cover.

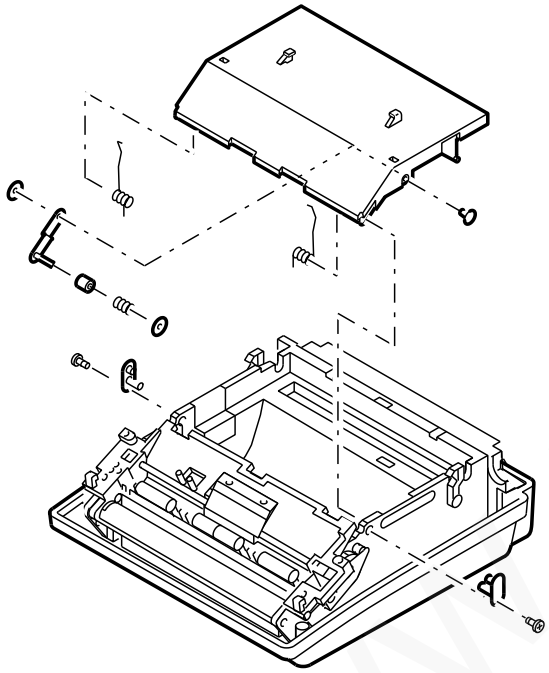


Figure 1. Printer cover

7. Remove three screws (Figure 2) retaining the thermal head metal cover and ground wire.
8. Remove four screws (Figure 2) retaining the thermal head.
9. Remove tape holding wires to printer cover.

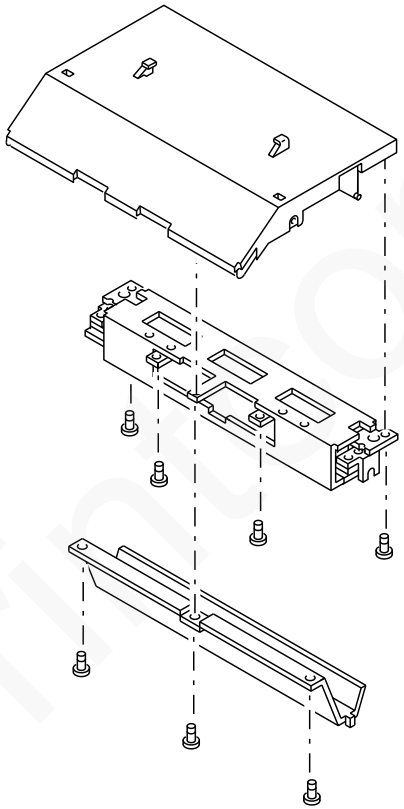


Figure 2. Print head

Replacement

1. Reinstall in reverse order.

REP 2.1 Upper Scanner Assembly

Parts list on PL 2.2

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove the top cover assembly (REP 1.3).
4. Remove four screws retaining the main chassis.
5. Lift the front of the chassis to gain access and remove the screw (Figure 1) from the lock plate.
6. Remove the screw retaining the ground wire from the right side of the upper scanner.

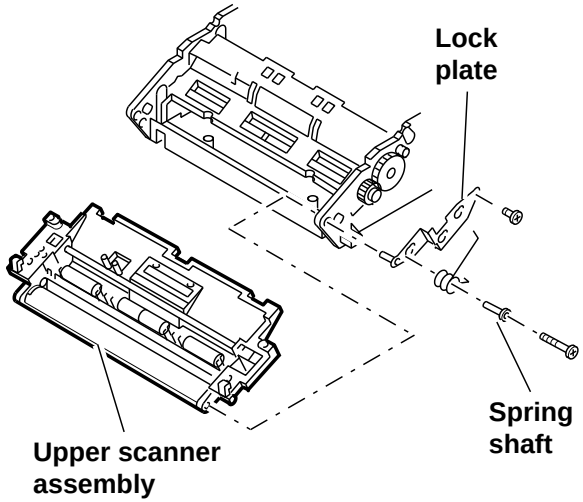


Figure 1. Upper scanner assembly

Replacement

1. Reinstall in reverse order.

REP 2.2 Document Sensor and Document Sensor Actuator

Parts List on PL 2.2

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove two screws (Figure 1) retaining the document sensor spring bracket.
4. Cut cable tie and remove the document sensor and document sensor actuator.

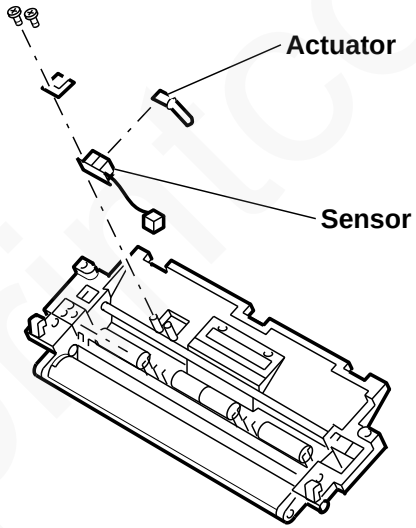


Figure 1. Sensor and actuator

Replacement

NOTE: Ensure the wires are routed properly and reinstall cable ties to prevent damage to the wires.

1. Reinstall in reverse order.

REP 2.3 Scanner Interlock

Parts List on PL 2.2

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove two screws (Figure 1) retaining the scanner interlock bracket.
4. Cut cable tie and remove two screws (Figure 1) retaining the interlock to the bracket.

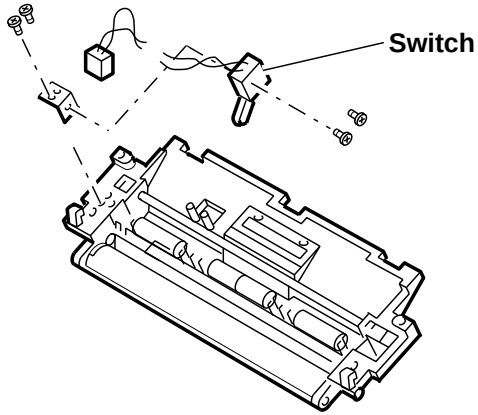


Figure 1. Scanner interlock

Replacement

NOTE: Ensure the wires are routed properly and reinstall cable ties to prevent damage to the wires.

1. Reinstall in reverse order.

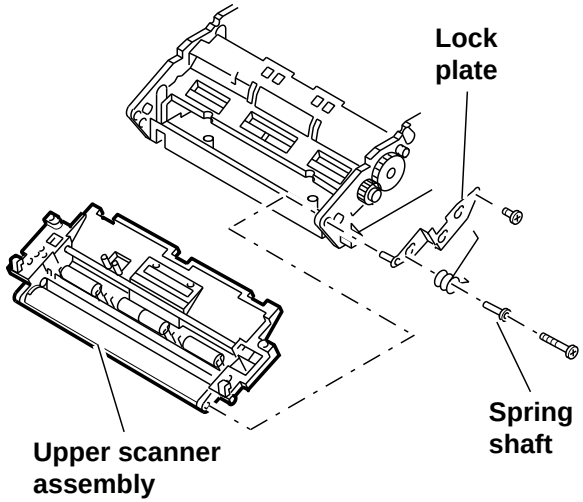


Figure 1. Upper scanner assembly

Replacement

1. Reinstall in reverse order.

REP 2.2 Document Sensor and Document Sensor Actuator

Parts List on PL 2.2

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove two screws (Figure 1) retaining the document sensor spring bracket.
4. Cut cable tie and remove the document sensor and document sensor actuator.

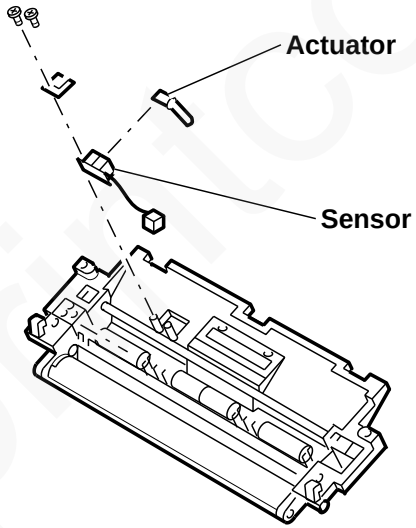


Figure 1. Sensor and actuator

Replacement

NOTE: Ensure the wires are routed properly and reinstall cable ties to prevent damage to the wires.

1. Reinstall in reverse order.

REP 2.3 Scanner Interlock

Parts List on PL 2.2

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove two screws (Figure 1) retaining the scanner interlock bracket.
4. Cut cable tie and remove two screws (Figure 1) retaining the interlock to the bracket.

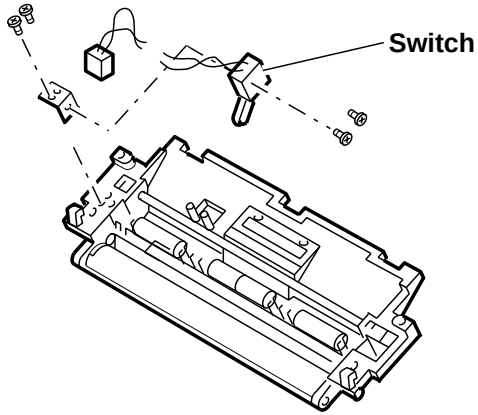


Figure 1. Scanner interlock

Replacement

NOTE: Ensure the wires are routed properly and reinstall cable ties to prevent damage to the wires.

1. Reinstall in reverse order.

REP 2.4 Scan Sensor

Parts List on PL 2.2

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove four screws (Figure 1) retaining the metal bar and ground wires to the scanner assembly.
4. Remove the center idler roller clamp.
5. Push on one side of the sensor to release from the upper scanner and release scan sensor from scan assembly.
6. Cut cable tie and remove sensor.

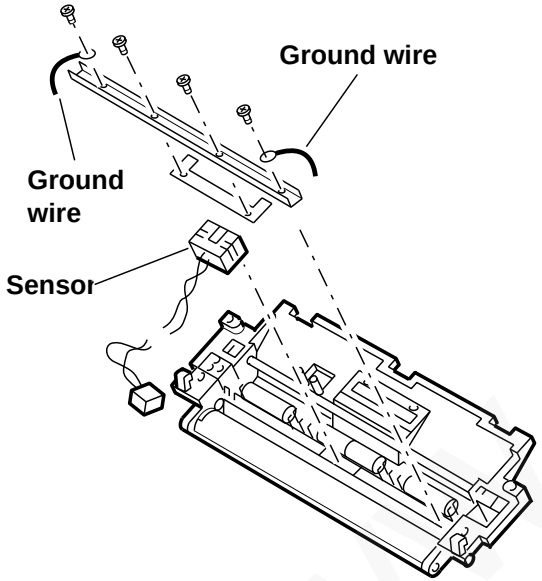


Figure 1. Scan sensor

Replacement

NOTE: Ensure the wires are routed properly and reinstall cable ties to prevent damage to the wires.

1. Reinstall in reverse order.

REP 2.5 Retard Pad

Parts List on PL 2.2

Removal

1. Disconnect the power cord from the rear of the machine.
2. Open the scanner cover.
3. Remove two screws retaining the retard pad to the scanner.
4. Remove ground wire from retard pad.

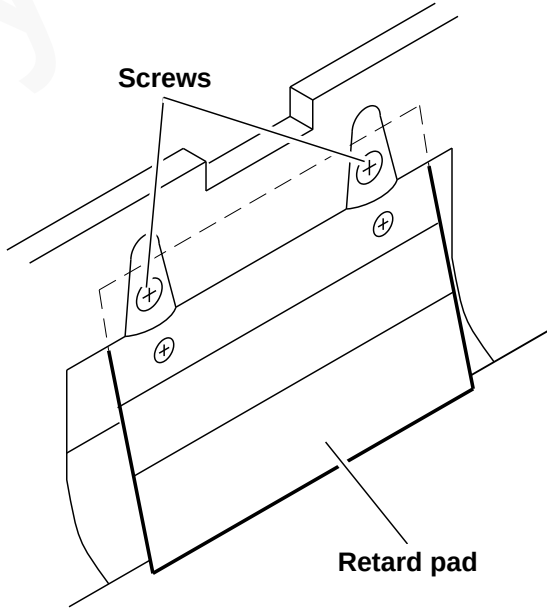


Figure 1. Retard pad

Replacement

1. Reinstall in reverse order.

REP 2.6 Platen Roller

Parts List on PL 2.2

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove the top cover assembly (REP 1.3).

CAUTION

Removing the main chassis from the bottom cover will expose the PWB's. Follow electrostatic discharge precautions.

4. Remove the main chassis assembly (REP 4.7).
5. Turn the main chassis upside down.
6. Remove four screws retaining the main PWB.
7. Disconnect CN807 from the main, CN1 from the CIS, and put the main on the LCU.
8. Remove two screws (Figure 1) from the lock plate.
9. Open the upper scanner and push the lock plate to the rear to remove.
10. Remove the slit washer (Figure 1) from the white platen roller.
11. Remove the platen roller from gear E assembly and bearing A and remove platen roller from chassis.
12. Remove platen sleeves from platen roller.

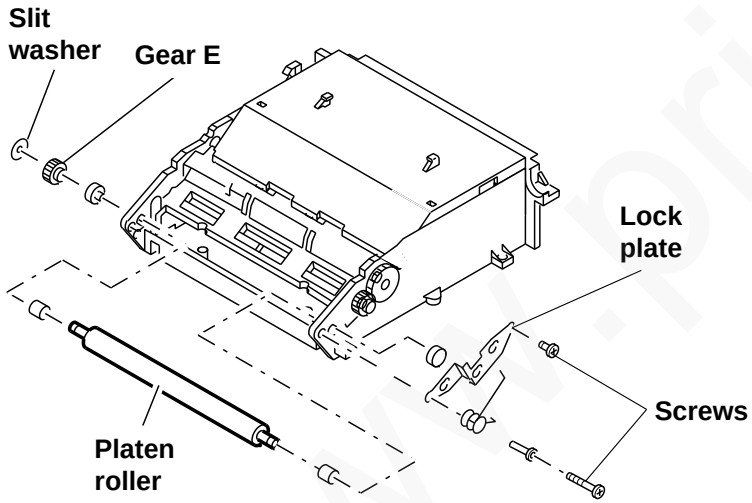


Figure 1. Platen roller

Replacement

1. Reinstall in reverse order.

NOTE: Ensure the spring attaches to the top of the lock plate when the front screw is reinstalled in the lock plate.

REP 2.7 Feed Roller

Parts List on PL 2.1

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove the top cover assembly (REP 1.3).

CAUTION

Removing the main chassis from the bottom cover will expose the PWB's. Follow electrostatic discharge precautions.

4. Remove the main chassis assembly (REP 4.7).
5. Remove two screws from the lock plate (Figure 1).
6. Open the upper scanner and push the plate to the rear to remove.
7. Remove the upper scanner assembly.
8. Turn the main chassis upside down.
9. Remove the four screws retaining the main PWB.
10. Disconnect CN801, CN802, CN803, and CN804 from the main PWB and remove the main PWB.
11. Remove four screws retaining the plate and grounding clips covering the ADF roller assembly (Figure 2).
12. Remove the slit washer (Figure 1) retaining the center gear.
13. Remove gear D assembly, gear G, and bearings from the feed roller.
14. Remove the roller.

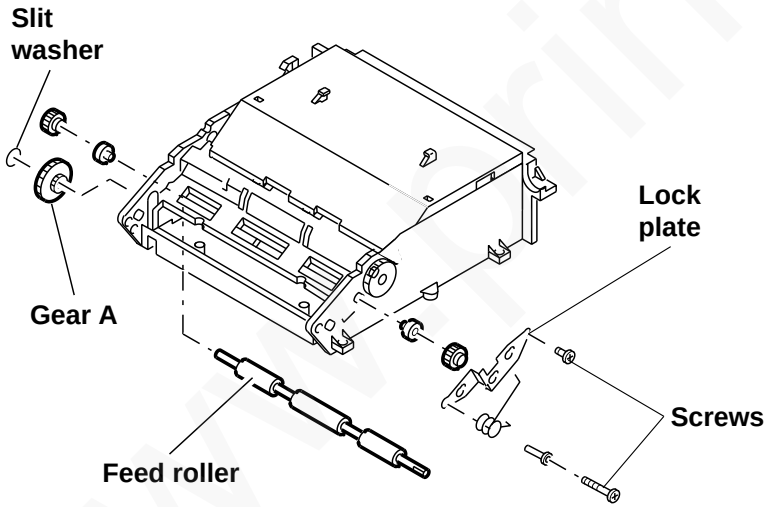


Figure 1. Feed roller

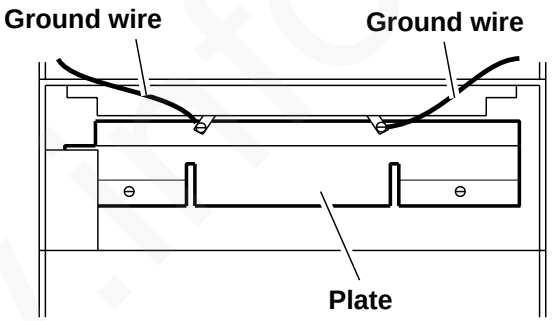


Figure 2. Plate removal

Replacement

1. Reinstall in reverse order.

REP 2.8 ADF Roller Assembly and ADF Roller

Parts List on PL 2.2

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove the top cover assembly (REP 1.3).

CAUTION

Removing the main chassis from the bottom cover will expose the PWB's. Follow electrostatic discharge precautions.

4. Remove the main chassis assembly (REP 4.7).
5. Remove two screws from the lock plate (Figure 1).
6. Open the upper scanner and push the plate to the rear to remove.
7. Remove the upper scanner assembly.
8. Turn the main chassis upside down.
9. Remove the four screws retaining the main PWB.
10. Disconnect CN801, CN802, CN803, and CN804 from the main PWB and remove the main PWB.
11. Remove four screws retaining the plate and grounding clips covering the ADF roller assembly (Figure 2).
12. Remove the plate and grounding clips.
13. Remove the two screws from both gears on ADF roller shaft (Figure 1) and slide ADF roller shaft out of the assembly.

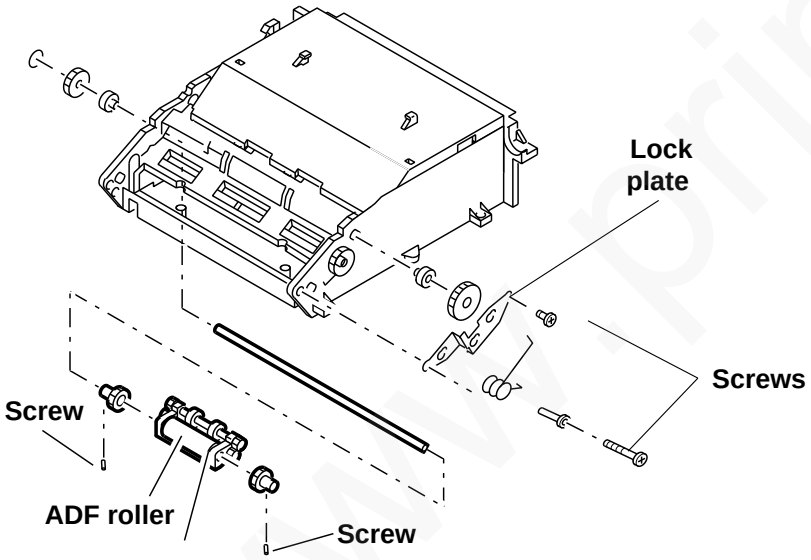


Figure 1. ADF roller

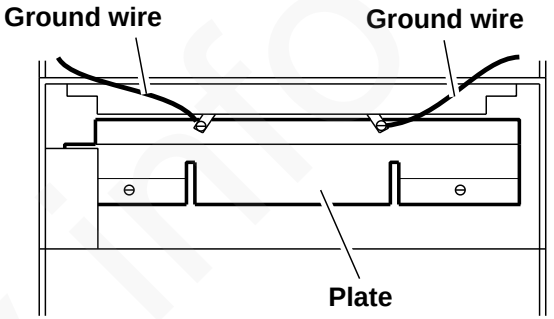


Figure 2. Plate removal

Replacement

NOTES: Observe the orientation of the ADF clutch on the roller. Clutch should be located away from the scan feed motor.

Be sure to align both gears to the ADF shaft and install the screws before reinstalling the lock plate.

1. Reinstall in reverse order.

REP 2.9 Scan Feed Motor

Parts List on PL 2.1

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove the top cover assembly (REP 1.3).

CAUTION

Removing the main chassis from the bottom cover will expose the PWB's. Follow electrostatic discharge precautions.

4. Remove the main chassis assembly (REP 4.7).
5. Turn the main chassis upside down.
6. Remove four screws retaining the main PWB.
7. Remove the gear B to gain access to the scan feed motor mounting screws.

NOTE: Observe the location of document motor wires and position the motor the same at replacement.

8. Remove two screws retaining the motor.
9. Disconnect CN802 from the main PWB and remove the motor.

Replacement

1. Reinstall in reverse order.

REP 2.10Contact Image Sensor (CIS)

Parts List on PL 2.2

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove the top cover assembly (REP 1.3).

CAUTION

Removing the main chassis from the bottom cover will expose the PWB's. Follow electrostatic discharge precautions.

4. Remove the main chassis assembly (REP 4.7).
5. Turn the main chassis upside down.
6. Remove four screws retaining the main PWB.
7. Disconnect CN807 from the main PWB and CN1 from the CIS.
8. Put the main on the LCU.
9. Loosen the grounding clips covering the ADF roller assembly (Figure 2).
10. Remove two screws retaining the contact image scanner assembly .
11. Remove the screw securing the R. H. bracket and ground wire. Remove the bracket.
12. Remove the platen roller gear and the large center gear. Remove the screw securing the L. H. bracket and ground wire. Remove the bracket.
13. Remove the CIS.

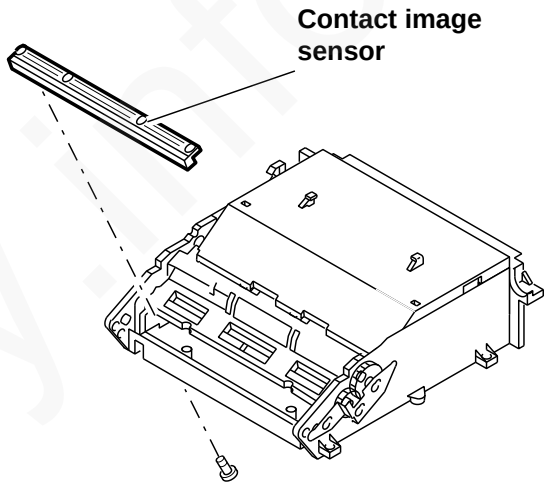


Figure 1. Contact image sensor

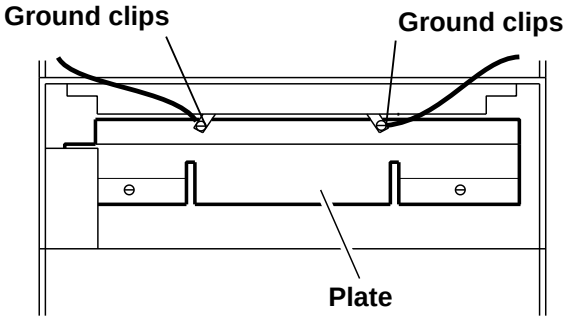


Figure 2. Grounding clips

Replacement

1. Reinstall in reverse order.

REP 3.1 Thermal Head
Parts List on PL 3.1

Removal

1. Disconnect the power cord from the rear of the machine.
2. Open the printer cover.
3. Remove three screws (Figure 1) retaining the thermal head metal cover and ground wire.
4. Remove four screws (Figure 1) retaining the thermal head bracket.

NOTE: Use a small screwdriver to assist in disconnecting the connectors. Do not pull on the wires.

5. Disconnect connectors from the thermal head.
6. Slide the thermal head to the right to remove from the thermal head bracket.
7. Remove the L.H. bracket and the R. H. bracket from the thermal head.

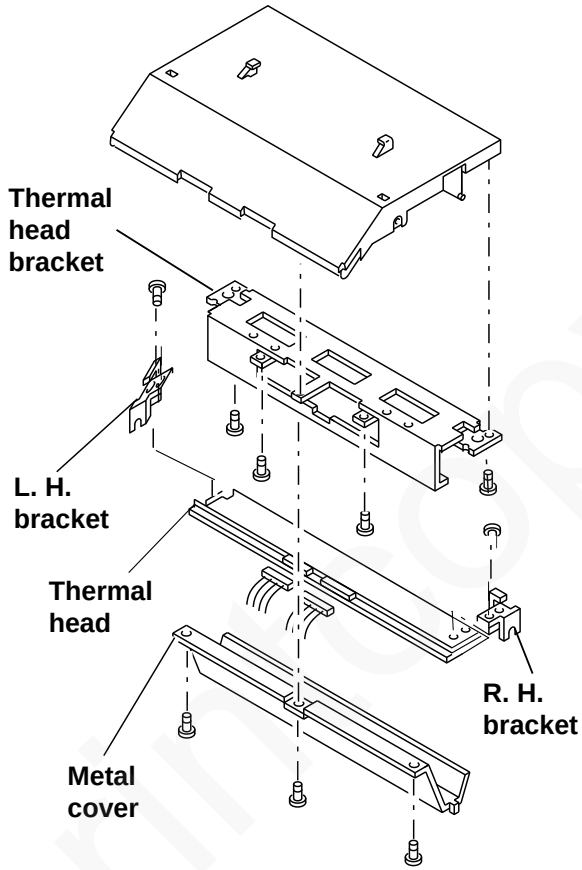


Figure 1. Thermal head

Replacement

1. Reinstall in reverse order.

REP 3.2 Print Roller

Parts List on PL 3.1

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the document tray assembly.
3. Remove the control panel assembly (REP 1.1).
4. Remove the top cover assembly (REP 1.3).
5. Remove two screws retaining upper and lower guides.
6. Remove guides.
7. Unlatch and rotate platen bearings (Figure 1) upright.
8. Lift out print roller.
9. Remove gear and bearings from print roller.

Replacement

1. Reinstall in reverse order.

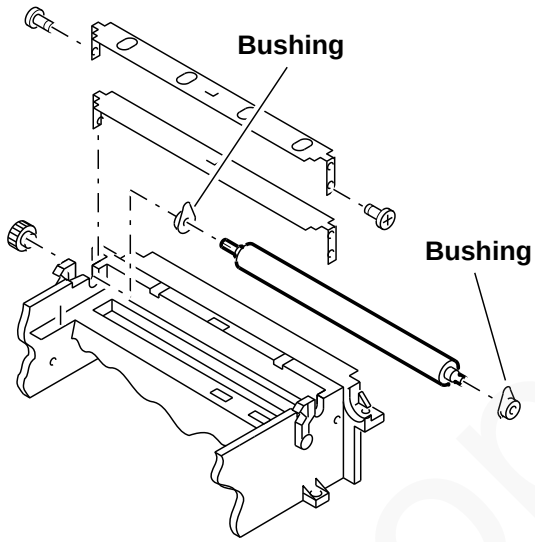


Figure 1. Print roller

REP 3.3 Print Motor

Parts List on PL 3.1

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove the top cover assembly (REP 1.3).

CAUTION

Removing the main chassis from the bottom cover will expose the PWB's. Follow electrostatic discharge precautions.

4. Remove the main chassis assembly (REP 4.7).
5. Turn the main chassis upside down.
6. Remove two screws retaining the LCU PWB.
7. Disconnect CN201 from the LCU PWB and put the PWB on the main PWB.
8. Remove two screws retaining the motor and ground wires.

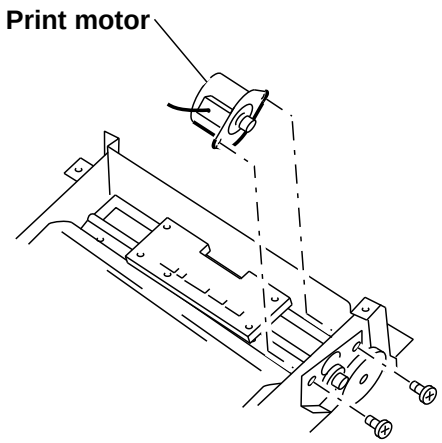


Figure 1. Print motor

Replacement

1. Reinstall in reverse order.

REP 3.4 Printer Interlock

Parts List on PL 3.1

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the document tray and output tray.
3. Remove the paper roll.

CAUTION

Removing the metal bottom pan will expose the PWB's. Follow electrostatic discharge precautions.

4. Turn the machine upside down.
5. Remove five screws securing the metal bottom pan.
6. Remove two screws retaining the LCU PWB and put LCU on the main.
7. Remove the screw (Figure 1) retaining the printer cover interlock bracket.
8. Remove two screws (Figure 1) retaining the interlock to the bracket .
9. Disconnect CN705 from paper sensor PWB, cut cable tie, and remove interlock.

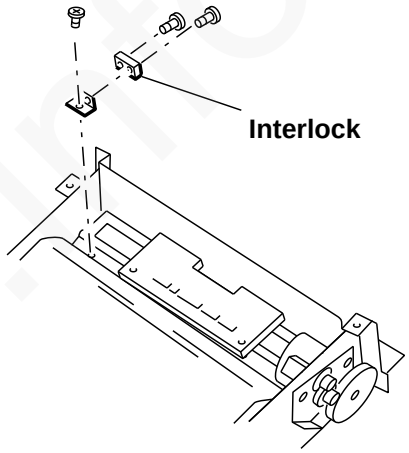


Figure 1. Printer interlock

Replacement

1. Reinstall in reverse order.

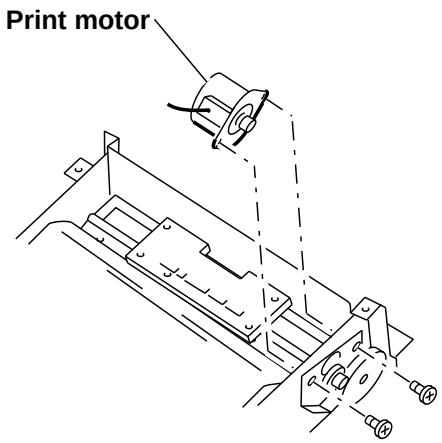


Figure 1. Print motor

Replacement

1. Reinstall in reverse order.

REP 3.4 Printer Interlock

Parts List on PL 3.1

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the document tray and output tray.
3. Remove the paper roll.

CAUTION

Removing the metal bottom pan will expose the PWB's. Follow electrostatic discharge precautions.

4. Turn the machine upside down.
5. Remove five screws securing the metal bottom pan.
6. Remove two screws retaining the LCU PWB and put LCU on the main.
7. Remove the screw (Figure 1) retaining the printer cover interlock bracket.
8. Remove two screws (Figure 1) retaining the interlock to the bracket .
9. Disconnect CN705 from paper sensor PWB, cut cable tie, and remove interlock.

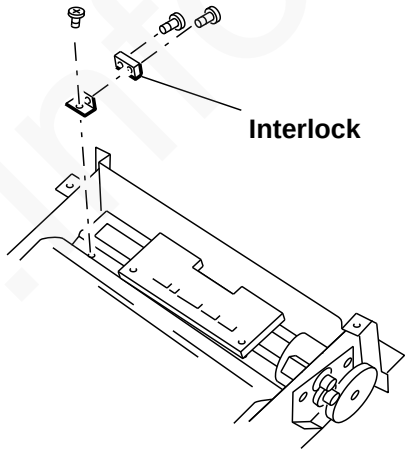


Figure 1. Printer interlock

Replacement

1. Reinstall in reverse order.

REP 3.5 Paper Sensor PWB

Parts List on PL 3.1

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the document tray and output tray.
3. Remove the paper roll.

CAUTION

Removing the metal bottom pan will expose the PWB's. Follow electrostatic discharge precautions.

4. Turn the machine upside down.
5. Remove five screws securing the metal bottom pan.
6. Remove two screws retaining the LCU PWB and put LCU on the main.
7. Remove five screws (Figure 1) retaining the paper sensor PWB and remove PWB.
8. Disconnect all connectors from paper sensor PWB.
9. Remove the paper sensor PWB.

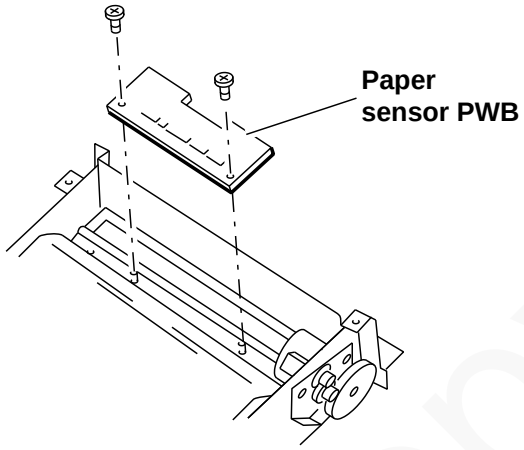


Figure 1. Paper sensor PWB

Replacement

1. Reinstall in reverse order.

REP 3.6 Jam Sensor

Parts List on PL 3.1

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove the top cover assembly (REP 1.3).

CAUTION

Removing the main chassis from the bottom cover will expose the PWB's. Follow electrostatic discharge precautions.

4. Remove the main chassis assembly (REP 4.7).
5. Turn the main chassis upside down.
6. Remove two screws retaining the LCU PWB.
7. Remove two screws (Figure 1) retaining the jam sensor.
8. Disconnect jam sensor connector (CN704) from the paper sensor PWB.
9. Cut cable tie and remove sensor.

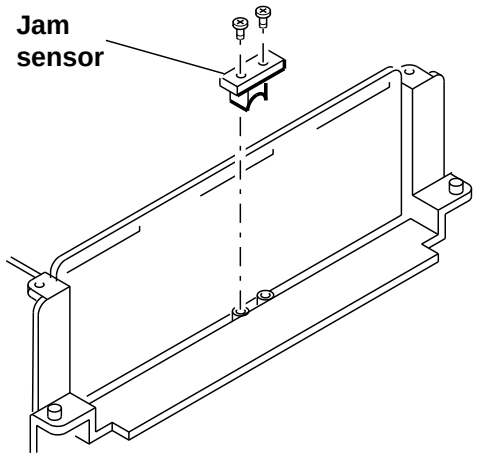


Figure 1. Jam sensor

Replacement

1. Reinstall in reverse order.

REP 3.7 Paper Cutter

Parts List on PL 3.1

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove the top cover assembly (REP 1.3).
4. Turn the terminal upside down.
5. Remove five screws retaining the metal bottom pan.
6. Remove two screws retaining the LCU PWB (REP 4.3).
7. Disconnect the paper cutter connector (CN702) from the paper sensor PWB.
8. Remove two screws retaining the paper cutter and ground wires.

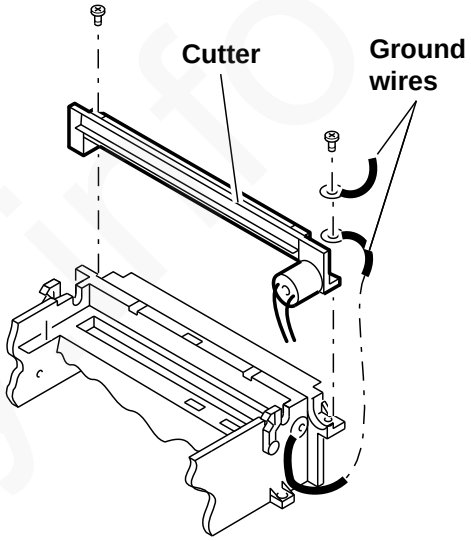


Figure 1. Paper cutter

1. Reinstall in reverse order.

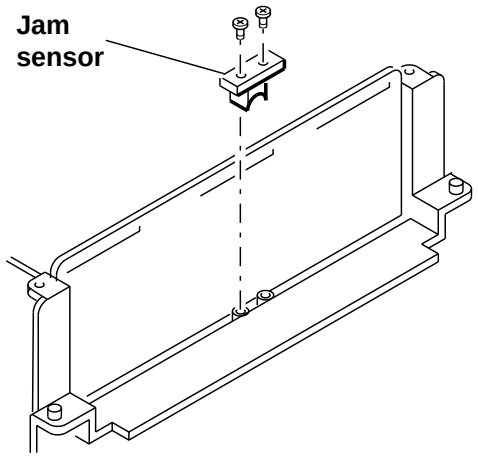


Figure 1. Jam sensor

Replacement

1. Reinstall in reverse order.

REP 3.7 Paper Cutter

Parts List on PL 3.1

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove the top cover assembly (REP 1.3).
4. Turn the terminal upside down.
5. Remove five screws retaining the metal bottom pan.
6. Remove two screws retaining the LCU PWB (REP 4.3).
7. Disconnect the paper cutter connector (CN702) from the paper sensor PWB.
8. Remove two screws retaining the paper cutter and ground wires.

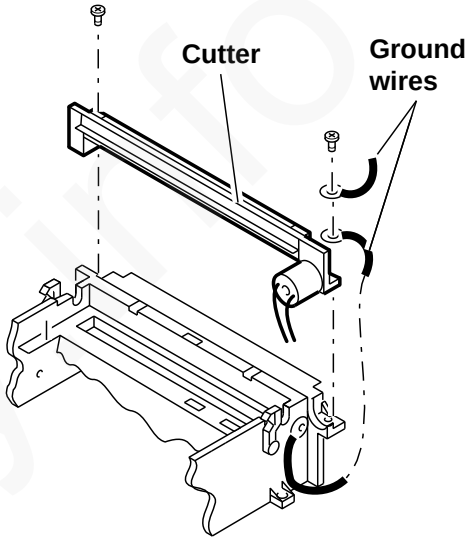


Figure 1. Paper cutter

1. Reinstall in reverse order.

REP 4.1 Main PWB

Parts List on PL 4.1

CAUTION

Follow electrostatic discharge precautions. Static electricity can damage this part.

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the document tray assembly.
3. Turn the machine upside down.
4. Remove five screws retaining the metal bottom pan.
5. Remove four screws (figure 1) retaining the main PWB.
6. Disconnect connectors from the main PWB and remove the PWB.
7. Remove EPROMS IC821 and IC822 (figure 2).

Replacement

1. Set the switches on SW801 (figure 2) to equal the switches on the removed PWB.
2. Reinstall in reverse order.

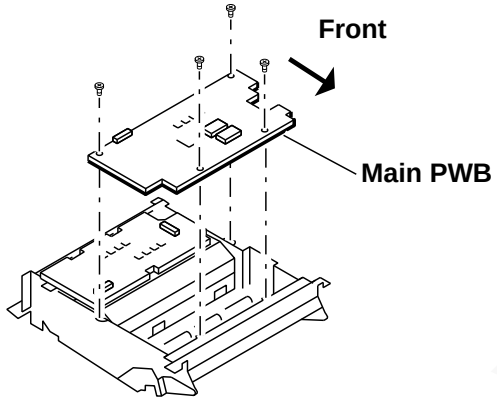


Figure 1. Main PWB

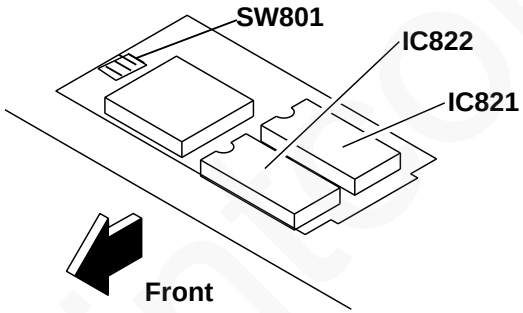


Figure 2. EPROMS and SW801

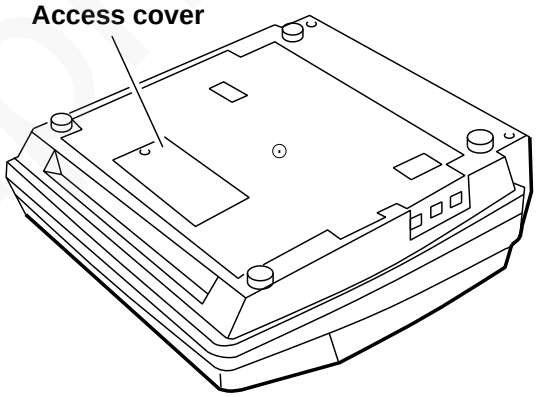


Figure 3. Access cover for EPROMs

REP 4.2 EPROMS

Parts List on PL 4.1

CAUTION

Follow electrostatic discharge precautions. Static electricity can damage this part.

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the document tray, output tray, and thermal paper roll.
3. Turn the machine upside down.
4. Remove the plastic rivot from the insert and remove the access cover (Figure 3).
5. Remove EPROMs IC821 and IC822 (Figure 2).

Replacement

NOTE: Use care not to bend any legs on EPROMs.

1. Reinstall in reverse order.
2. Perform service function 45, RAM ALL CLEAR, in service mode.

REP 4.3 LCU (Coupler) PWB

Parts List on PL 4.1

CAUTION

Follow electrostatic discharge precautions. Static electricity can damage this part.

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the document tray assembly.
3. Turn the machine upside down.
4. Remove five screws retaining the metal bottom pan.
5. Remove two screws (Figure 1) retaining the LCU PWB.
6. Disconnect connectors from the LCU PWB and remove the PWB.

RX NOTE: Notice strapping position and strap new LCU PWB or refer to section 6.

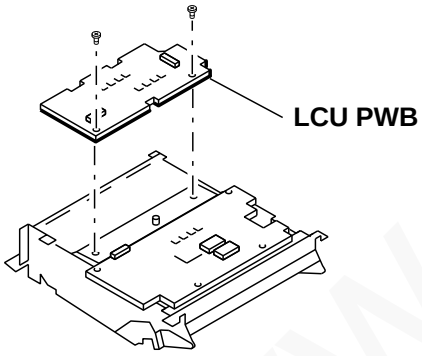


Figure 1. LCU PWB

Replacement

1. Reinstall in reverse order.

REP 4.4 Speaker

Parts List on PL 4.1

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove the top cover assembly (REP 1.3).
4. Remove the jack panel.
5. Remove the two nuts retaining the speaker.
6. Turn the machine upside down.
7. Remove bottom metal pan.
8. Remove two screws retaining the LCU PWB.
9. Disconnect the speaker connector from the LCU PWB and remove speaker.

Replacement

1. Reinstall in reverse order.

REP 4.5 Power Supply

Parts List on PL 4.1

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove the top cover assembly (REP 1.3).

CAUTION

Removing the main chassis from the bottom cover will expose the PWB's. Follow electrostatic discharge precautions.

4. Remove the main chassis assembly (REP 4.7).
5. Remove the two screws retaining the power supply.

Replacement

1. Reinstall in reverse order.

REP 4.6 Fuse

Parts List on PL 4.1

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove the top cover assembly (REP 1.3).

CAUTION

Removing the main chassis from the bottom cover will expose the PWB's. Follow electrostatic discharge precautions.

4. Remove the main chassis assembly (REP 4.7).
5. Remove the two screws retaining the power supply.
6. Remove the screw retaining the power supply cover.
7. Remove the fuse.

Replacement

1. Reinstall in reverse order.

REP 4.7 Main Chassis Assembly

Parts List on PL 4.1

Removal

1. Disconnect the power cord from the rear of the machine.
2. Remove the control panel assembly (REP 1.1).
3. Remove the top cover assembly (REP 1.3).
4. Lift the front of the machine to gain access to screws located on the bottom cover.
5. Remove the screw from the center of the metal bottom pan.
6. Remove the two screws retaining the handset cradle and remove the cradle.
7. Remove four screws (figure 1) retaining the main chassis to the bottom cover.
8. Lift the main chassis assembly and reposition forward to gain access to the power connectors and ground wires.

NOTE: Use a small screwdriver to assist in disconnecting the connectors. Do not pull on the wires.

9. Disconnect the two connectors from the power supply.
10. Remove the two screws retaining the ground wires to the power supply.

CAUTION

Removing the main chassis from the bottom cover will expose the PWB's. Follow electrostatic discharge precautions.

11. Remove the main chassis assembly.

Replacement

1. Reinstall in reverse order.

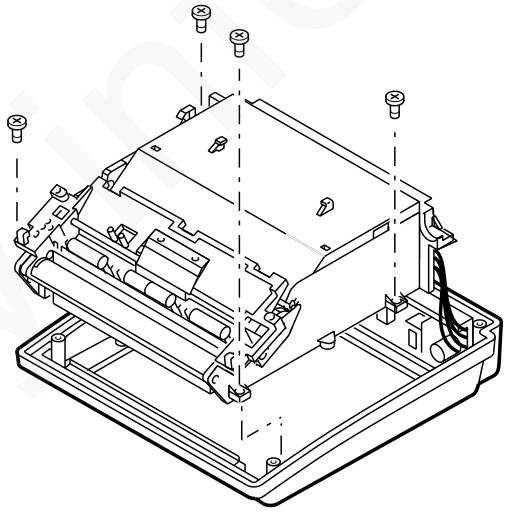


Figure 1. Main chassis

5. Parts List

Parts List Introduction

Overview

The Parts List section provides exploded view illustrations of all spared subsystem components and a listing of the corresponding part numbers. The illustrations show the relationships between parts.

Organization of this Section

The following elements make up the Parts List section:

Parts Lists (PL)

Each item number in the part numbers listing corresponds to an item number in the illustration. All the parts in a given subsystem of the machine will be located in the same illustration or in a series of associated illustrations. The parts which are not spared are indicated by "- -" on the Part column.

Exploded View Illustrations

An item that is called out on an illustration has a corresponding listing within this section.

Components are given item numbers that correspond to the part number listings.

Hardware items are lettered. Refer to the Common Hardware listing towards the end of this section to identify the item and the corresponding part number.

Assemblies and kits are a combination of several separate components. A bracket is used on the illustration when an assembly or kit is spared but is not shown. The item number of the assembly or kit precedes the bracket; the item numbers of the piece parts follow it.

Common Hardware

The common hardware is listed in alphabetical order by the letter or letters used to identify each item in the hardware listing and in the illustrations. All dimensions are in millimeters unless otherwise noted.

Part Number Index

This index lists all the spared parts in the system in numerical order. Each number is followed by a reference to the parts list on which the part may be found.

Other Information

Abbreviations are used in the parts lists and the exploded view illustrations to provide information in a limited amount of space. The following abbreviations are used in this manual:

A	-	AMP
P/J	-	Plug/Jack
P/O	-	Part of
PWB	-	Printed Wiring Board
RX	-	Rank Xerox
REF	-	Reference
Tag/MOD	-	Tag/Modification
US or USO	-	United States
W/	-	With
W/O	-	Without
XCL	-	Xerox Canada Limited
XLA	-	Xerox Latin America

Tag/MODs

The notation “Tag/MOD” in the part description indicates that the item is the entire Tag/Mod. The notation “P/O Tag/MOD” indicates that the item is only part of a tag change, or modification, to the equipment.

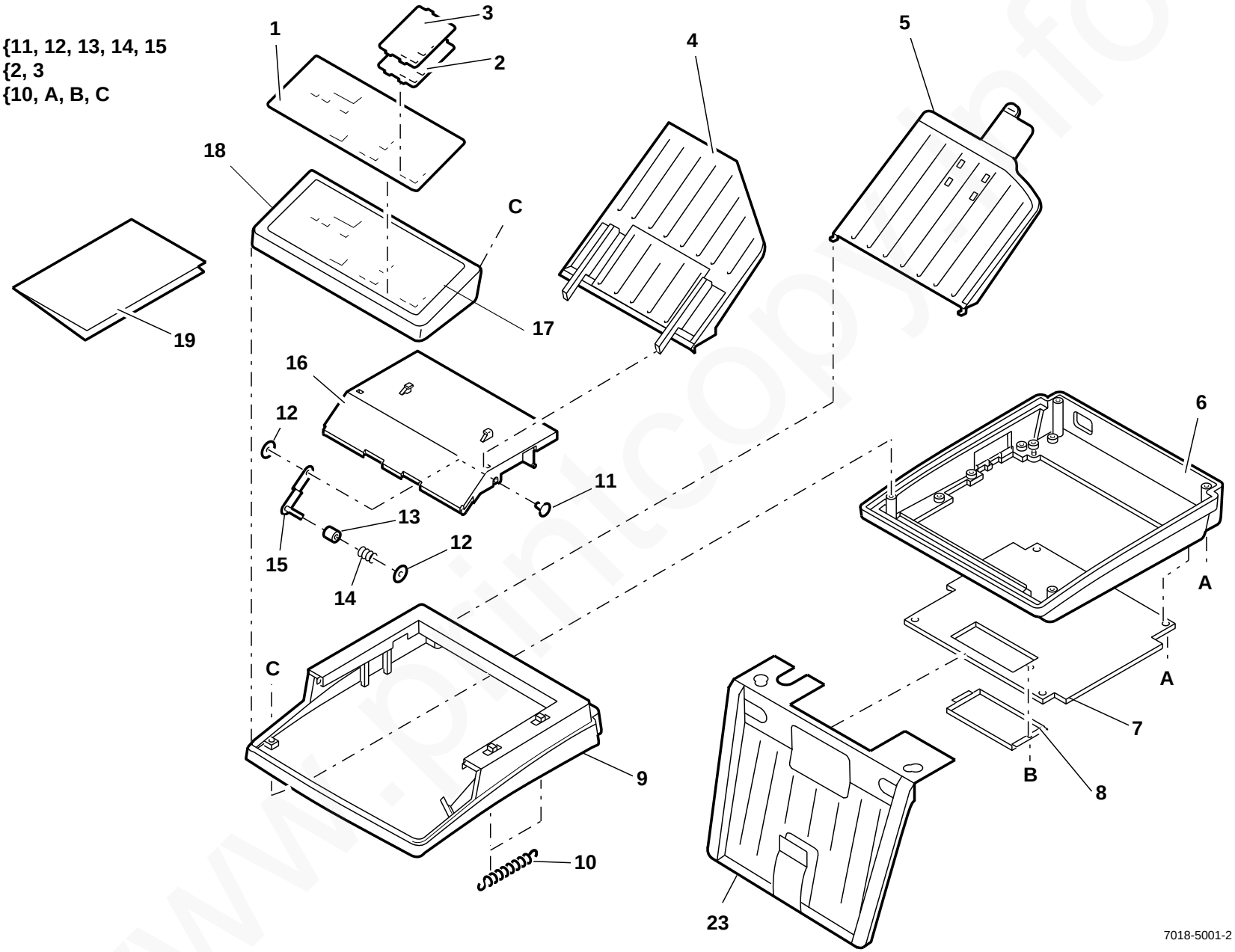
When a part or an assembly has a Tag/Mod associated with it, check the Tag/MOD Index in the General Information section of this manual for the name and purpose of the modification.

In some cases a part or assembly may be spared in two versions: with the Tag/MOD and without the Tag/MOD. In those cases, use whichever part is appropriate for the configuration of the machine on which the part is to be installed. If the machines does not have a particular Tag/MOD and the only replacement part available is listed as “W/Tag/MOD,” install the Tag/MOD kit or all the piece parts. The Tag/MOD index tells you which kit or piece parts you need.

Whenever you install a Tag/Mod kit or all the piece parts that make up a Tag/MOD, mark the appropriate number on the Tag/MOD matrix.

PL 1.1 Covers

20 {11, 12, 13, 14, 15
21 {2, 3
22 {10, A, B, C

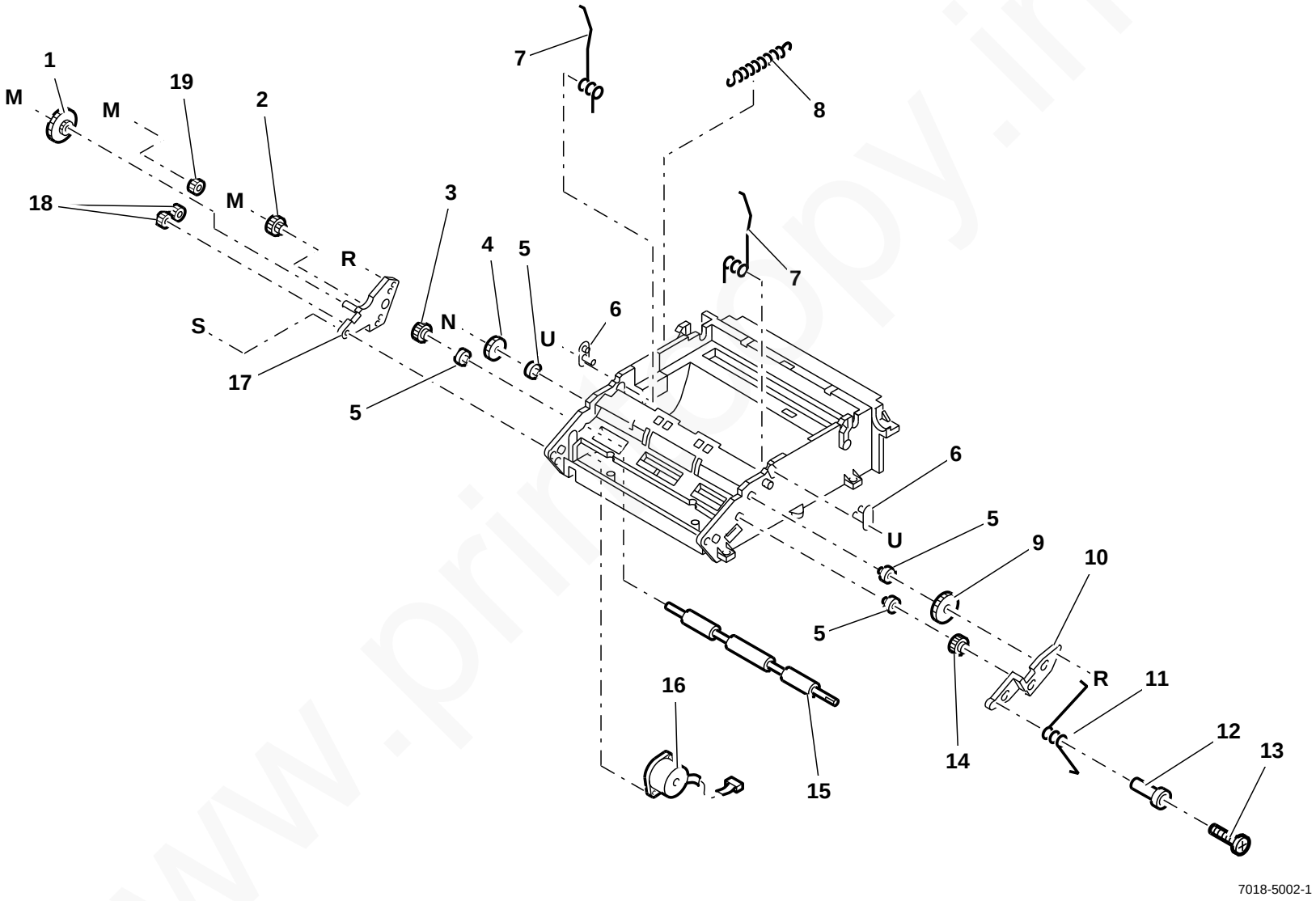


Item	Part	Description
1	002E37691	7018 Control Panel Insert (US-ENG)
	002E38941	7018 Control Panel Insert (XCL-FRE)
	002E38951	7018 Control Panel Insert (XLA-SPA)
	002E40531	7018 Control Panel Insert (RX/GB)
	002E40541	7018 Control Panel Insert (RX-DE)
	002E40551	7018 Control Panel Insert (RX-DK)
	002E40561	7018 Control Panel Insert (RX-FI)
	002E56710	7018 Control Panel Insert (RX-FR)
	002E40581	7018 Control Panel Insert (RX-IT)
	002E40591	7018 Control Panel Insert (RX-NO)
	002E40601	7018 Control Panel Insert (RX-PT)
	002E40611	7018 Control Panel Insert (RX-ES)
	002E40621	7018 Control Panel Insert (RX-SE)
	002E41660	7018 Control Panel Insert (RX-NL)
	002E46950	7018 Control Panel Insert (RX-BE)
	002E55850	7018 Control Panel Insert [RX-AU)
	002E42220	7019 Control Panel Insert (US-ENG)
	002E40791	7019 Control Panel Insert (XCL-FRE)
	002E40801	7019 Control Panel Insert (XLA-SPA)
	002E40631	7019 Control Panel Insert (RX/GB)
	002E40641	7019 Control Panel Insert (RX-DE)
	002E40651	7019 Control Panel Insert (RX-DK)
	002E40661	7019 Control Panel Insert (RX-FI)
	002E56720	7019 Control Panel Insert (RX-FR)
	002E40681	7019 Control Panel Insert (RX-IT)
	002E40691	7019 Control Panel Insert (RX-NO)
	002E40701	7019 Control Panel Insert (RX-PT)
	002E40711	7019 Control Panel Insert (RX-ES)
	002E40721	7019 Control Panel Insert (RX-SE)
	002E41670	7019 Control Panel Insert (RX-NL)
	002E46960	7019 Control Panel Insert (RX-BE)
	002E55860	7019 Control Panel Insert (RX-AU)
2	-	Mark Sheet (P/O item 21)
3	-	Plastic Cover (P/O item 21)
| 4	038K07551	Document Tray
5	038K07500	Output Tray
6	002E37672	Bottom Cover
7	Ref only	Metal Bottom Pan
8	Ref only	Access Cover
9	002K39560	Top Cover Assembly
10	-	Spring (P/O item 22)
11	-	Pin (P/O item 20)
12	-	E-Ring (P/O item 20)
13	-	Bushing (P/O item 20)
14	-	Spring (P/O item 20)
15	-	Latch Arm (P/O item 20)
16	002E37680	Printer Cover (REP 1.5)
17	002K39571	Control Panel Assembly (7018) (REP 1.1) (W/ Control Panel, Key Pad, Display, Front Cover)
	002K51081	Control Panel Assembly (7019) (REP 1.1) (W/ Control Panel, Key Pad, Display, Front Cover)
18	002E37700	Front Cover (P/O Item 17) (REP 1.2)
19	700P93406	User Handbook (US-ENG)
	700P93006	User Handbook (XLA-SPA)
	600F70180	User Handbook (XCL-FRE)
20	003K06280	Latch Kit
21	071K00500	Dial Plate Kit (7018) (10 cover, 10 mark)
	071K00530	Dial Plate Kit (7019) (10 cover, 10 mark)
22	Ref only	Hardware Kit (see Common Hardware)
23	097K13040	Accessory Catch Tray

|*RX Country and Language Codes: AU=Australia, AT=Austria, BE=Belgium, CH=Switzerland, DE=Germany, DK=Denmark, ENG=English, ES=Spain, FI=Finland, FR=France, FRE=French, GB=United Kingdom, GR=Greece, HK=Hong Kong, IE=Ireland, IT=Italy, MY=Malaysia, NL=Netherlands, NZ=New Zealand, NO=Norway, PT=Portugal, SG=Singapore, SPA=Spanish, SE=Sweden*

PL 2.1 Scanner

19 {N, M, R, S
20 {11, 12, 13
21 {6, 7, U

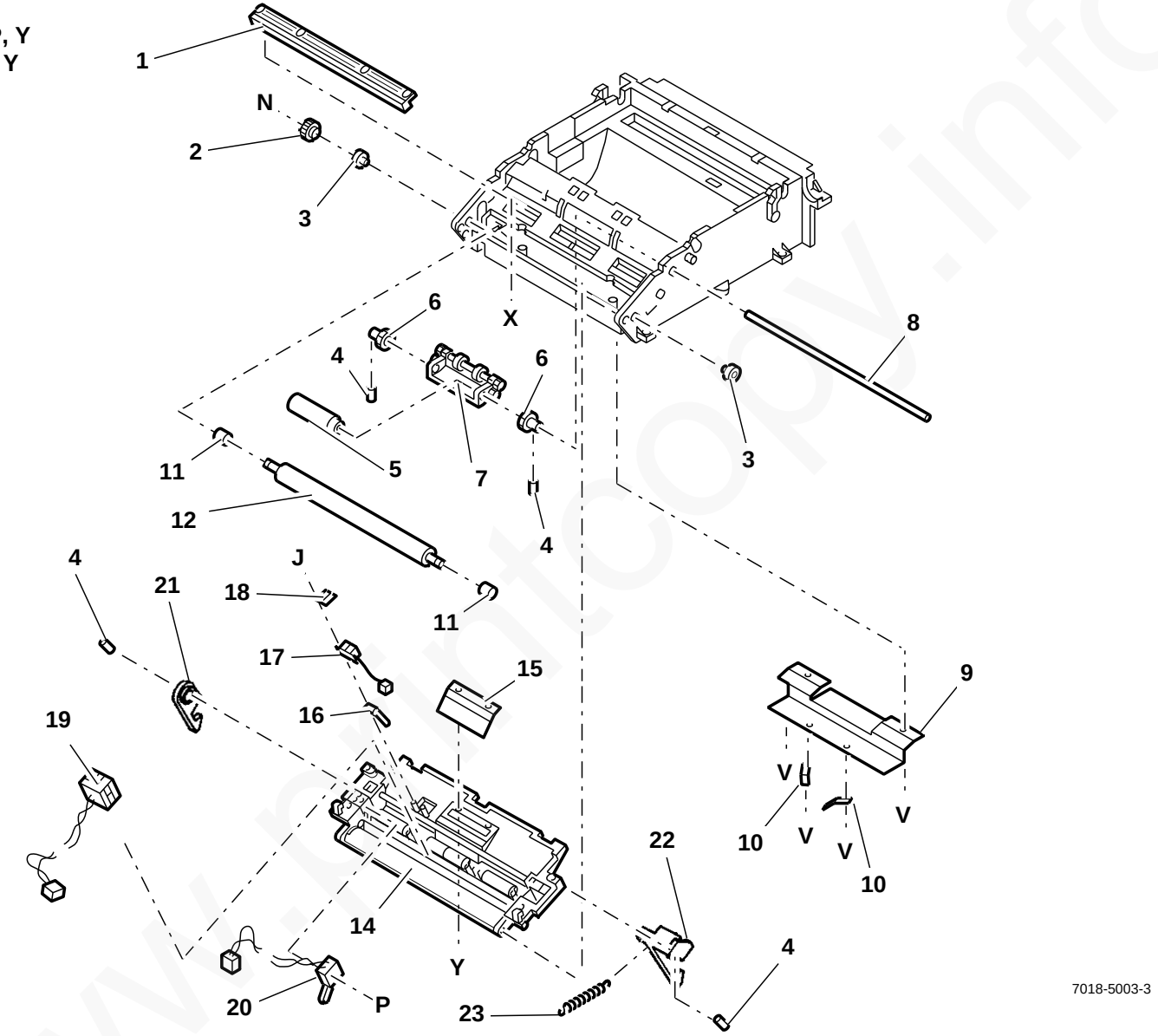


7018-5002-1

Item	Part	Description
1	007E18740	Gear Center
2	007E18780	Gear B
3	007K05840	Gear D Assembly
4	007E18790	Gear A
5	013E07130	Bearing A
6	-	Hinge (P/O item 21)
7	-	Spring (P/O item 21)
8	009E34200	Printer Latch Spring
9	007K05820	Gear F Assembly
10	Ref only	Lock plate
11	-	Spring (P/O item 20)
12	-	Spring Shaft (P/O item 20)
13	-	Screw (P/O item 20)
14	007E18760	Gear G
15	022E11450	Feed Roller (REP 2.7)
16	127K09210	Scan Feed Motor (REP 2.9)
17	Ref only	Bracket
18	007E18770	Gear C
19	Ref only	Hardware Kit (see Common Hardware)
20	009K00800	Scan Cover Spring Kit
21	009K00820	Printer Cover Spring Kit

PL 2.2 Scanner

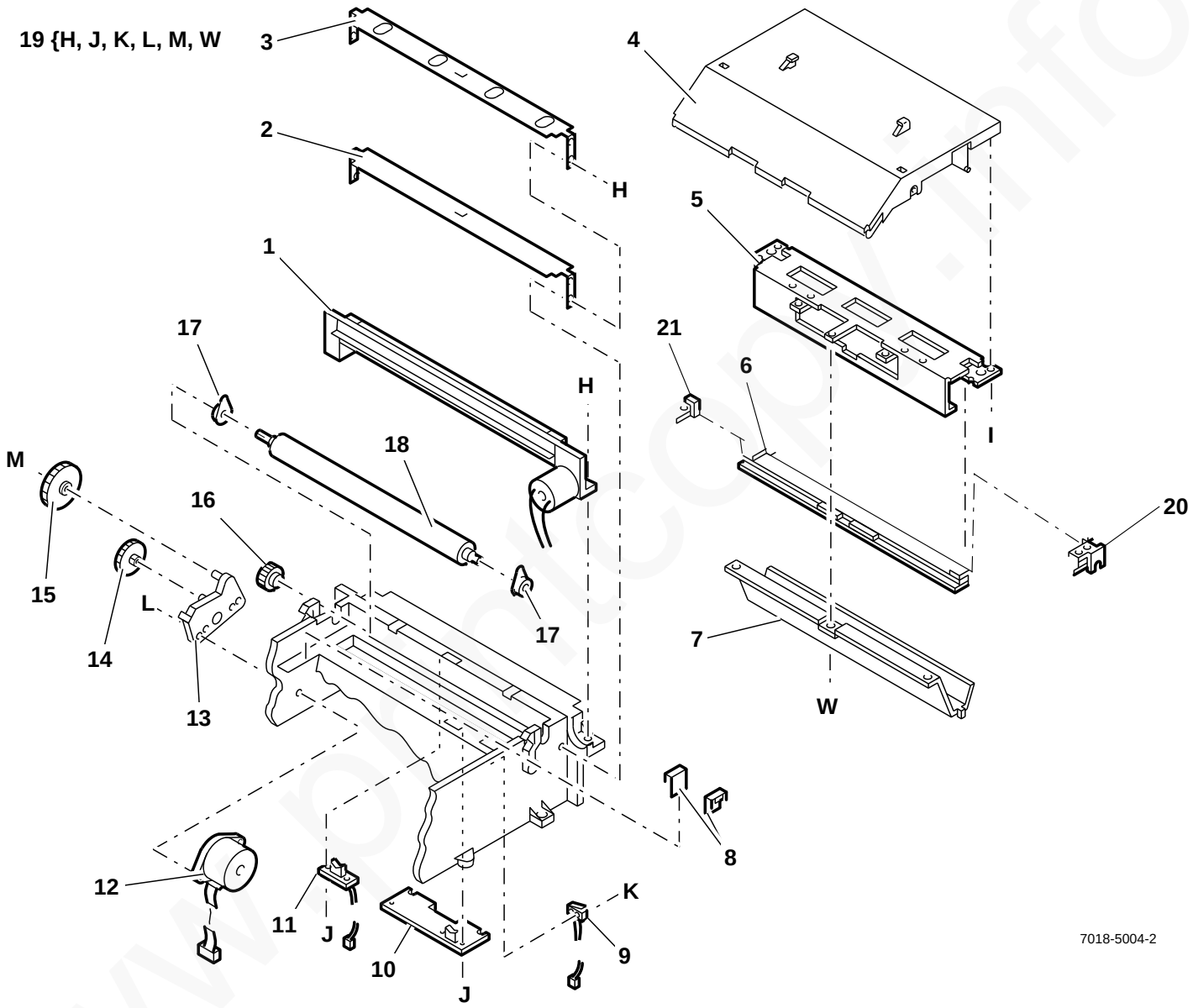
13 {4, 14 - 23, J, P, Y
24 {23, N, P, V, X, Y



Item	Part	Description
1	062K05860	Contact Image Sensor (CIS) (Tag 1) (REP 2.10) (Note 1)
2	007K05830	Gear E Assembly
3	013E07130	Bearing A
4	-	Screw P 2.0X4.5-SBK (P/O items 13 and 25)
5	022K18960	ADF Roller (REP 2.8)
6	007E18730	Gear A Sub Roller
7	022K18970	ADF Roller Assembly (REP 2.8)
8	Ref only	Shaft
9	Ref only	Plate
10	Ref only	Spring clip
11	013E07140	Platen Sleeve
12	090E01120	Platen Roller (white) (REP 2.6)
13	011K01730	Upper Scanner Assembly (REP 2.1)
14	-	Scanner Frame (P/O item 13)
15	017K01210	Retard Pad (P/O item 13) (REP 2.5)
16	120E05730	Document Sensor Actuator (P/O item 13) (REP 2.2)
17	130K51541	Document Sensor (P/O item 13) (REP 2.2)
18	Ref only	Clip (P/O item 13)
19	130K51561	Scan Sensor (P/O item 13) (REP 2.4)
20	110E04351	Scanner Interlock (P/O item 13) (REP 2.3)
21	003E22570	L. H. Latch (P/O item 13)
22	003E22560	R. H. Latch (P/O item 13)
23	-	Spring (P/O items 13 and 24)
24	-	Hardware Kit (see Common Hardware)
25	026K00830	Screw Kit (10 ea of item 4)

NOTE 1: When installing a CIS in a 7018 W/O Tag 1, you must replace the EPROM kit (PL 4.1) and mark Tag 1 on the Tag/MOD matrix.

PL 3.1 Printer



Item	Part	Description
1	037K00400	Paper Cutter (REP 3.7)
2	038E09950	Lower Guide
3	038E09961	Upper Guide
4	Ref only	Printer Cover (See PL 1.1)
5	Ref only	Bracket
6	110K04772	Thermal Head (REP 3.1)
7	Ref only	Guide
8	038E09940	A4 Spacer
9	110E04341	Printer Interlock (REP 3.4)
10	Ref Only	Paper Sensor PWB (See PL 4.1)
11	130K51902	Jam Sensor (REP 3.6)
12	127K09200	Print Motor (REP 3.3)
13	Ref only	Bracket
14	007E18780	Gear B
15	007E18740	Center Gear
16	007E18750	Print Roller Gear
17	013E07120	Bearing C
18	022E11460	Print Roller (REP 3.2)
19	Ref only	Hardware Kit (see Common Hardware)
20	Ref only	R. H. Bracket
21	Ref only	L. H. Bracket

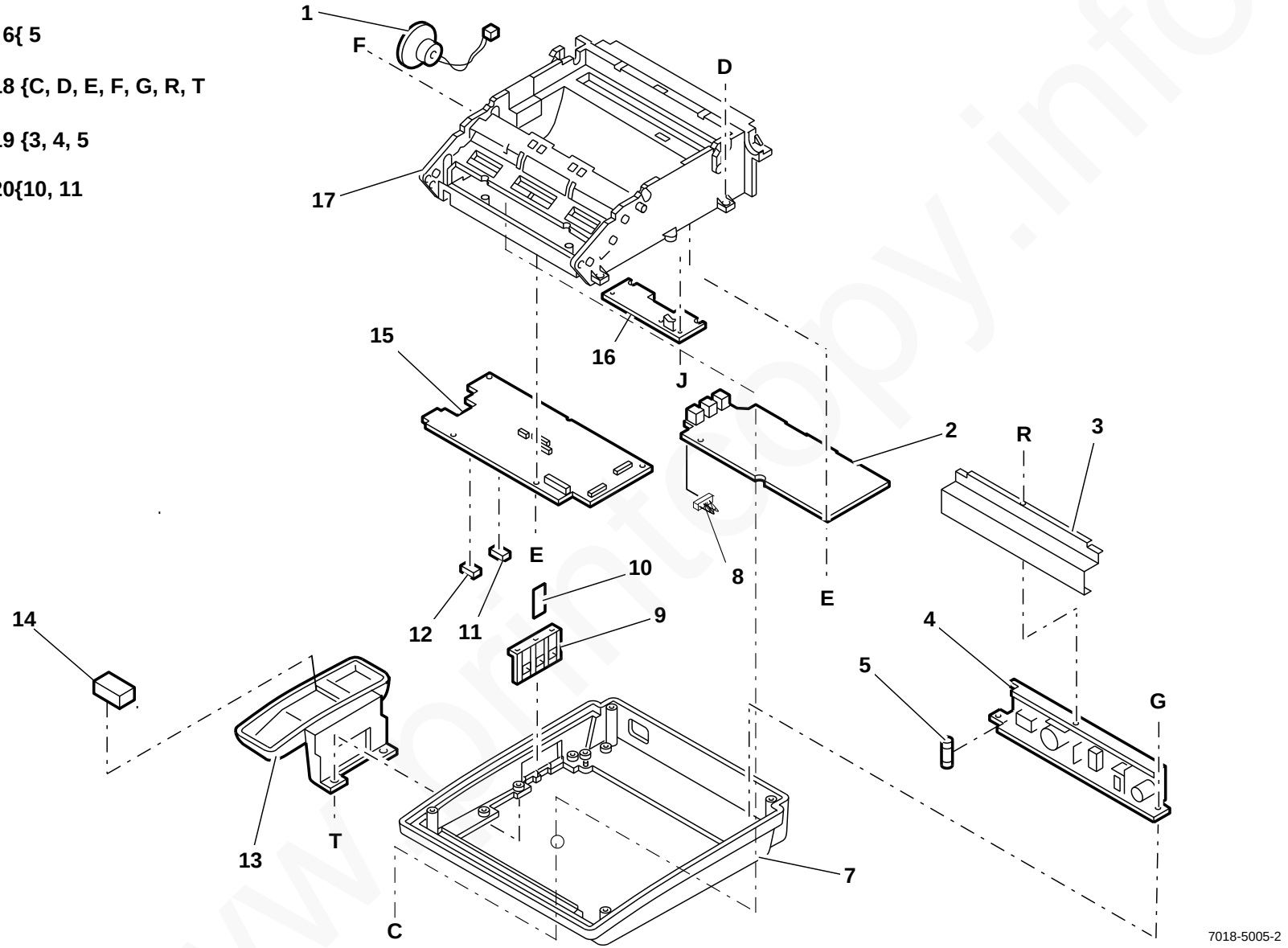
PL 4.1 Electrical

| 6{ 5

18 {C, D, E, F, G, R, T

19 {3, 4, 5

20{10, 11

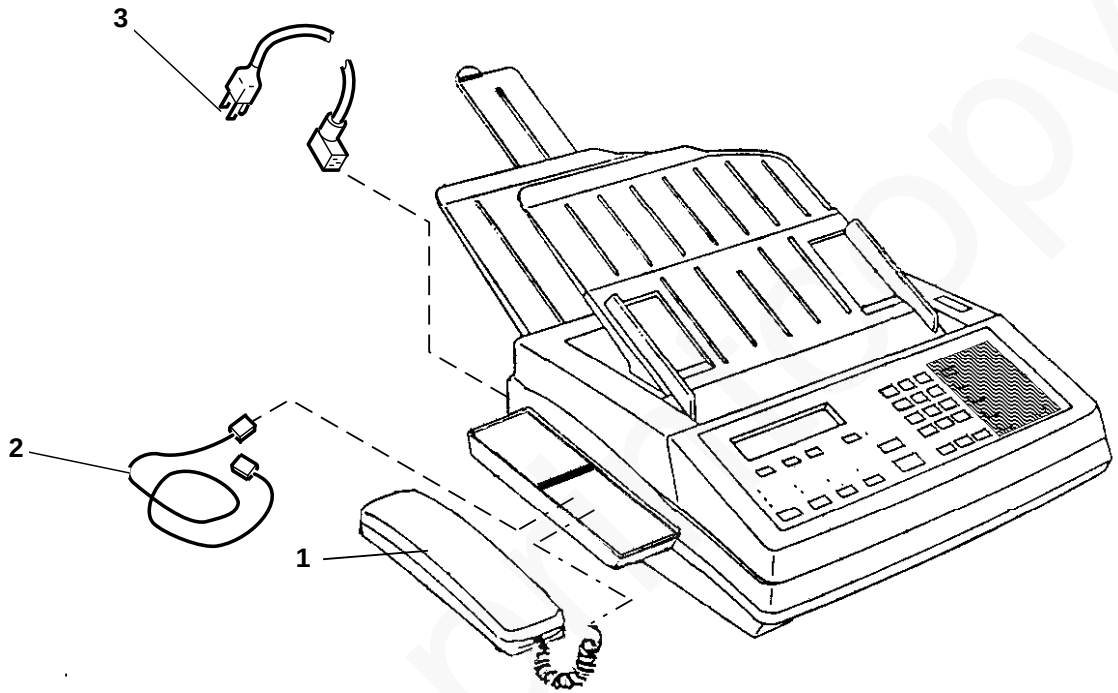


Item	Part	Description
1	130K51551	Speaker (REP 4.4)
2	140K37691	LCU (Coupler) PWB (US/XCL/XLA) (REP 4.3)
	140K46080	LCU (Coupler) PWB (RX, except FR) (REP 4.3)
	140K46100	LCU (Coupler) PWB (FR) (REP 4.3)
3	-	Cover (P/O item 19)
4	-	Power Supply PWA (P/O item 19)
5	-	Fuse (P/O item 6 and item 19)
6	108K00300	115 VAC Fuse Kit (Qty 5)
	108K00310	220 VAC Fuse Kit (Qty 5)
7	Ref only	Bottom Cover (see PL 1.1)
8	113K01621	Jumper Type A (RX-GB)
	113K01630	Jumper Type B (RX-BE/DK/GR/IT/NL/NO/PT/ES/SE/CH)
	113K01640	Jumper Type C (RX-FI)
	113K01650	Jumper Type D (RX-DE/AT)
	113K01670	Jumper Type F (RX-NZ)
	113K01790	Jumper Type G (RX-FR)
9	002E37660	Jack Panel
10	101E07750	Jack Panel Insert (RX)
11	-	Main EPROM (IC821) (P/O item 20)
12	-	EPROM (IC822) (P/O item 20)
13	068K02000	Telephone Cradle (US/XCL/XLA)
	068K01930	Telephone Cradle (RX, except DE/AT/CH)
	068K03060	Telephone Cradle (RX-DE/AT/CH)
14	002E53980	Telephone Adapter (RX-DE/AT/CH)
15	140K37701	7018 Main PWB (W/O EPROMs) (REP 4.1)
	140K46070	7019 Main PWB (W/O EPROMs) (REP 4.1)
16	130K51892	Paper Sensor PWB (REP 3.5)
17	Ref only	Main Chassis (REP 4.7)
18	Ref only	Hardware Kit (see Common Hardware)
19	105K05371	Power Supply Assembly 115 VAC (REP 4.5)
	105K07740	Power Supply Assembly 220 VAC (except FR) (REP 4.5)
	105K08810	Power Supply Assembly 220 VAC (FR) (REP 4.5)
20	-	7018/7019 EPROM kit (Note1) Use following Kit numbers (REP 4.2)
	537K15836	7018 EPROM KIT (Tag 1) (Note 1) (US/XCL/XLA)
	537K21710	7018 EPROM D5 Kit (RX-GB/IR/HK/SG/AU/NZ/ES)
	537K21720	7018 EPROM D5 Kit (RX-DE/IT/AT/CH)
	537K21731	7018 EPROM DA Kit (RX-FR)
	537K21740	7018 EPROM D6 kit (RX-PT/DK)
	537K21750	7018 EPROM D5 Kit (RX-FI/SE/NO)
	537K21760	7018 EPROM D5 Kit (RX-CH)
	537K22130	7018 EPROM D3 Kit (RX-NL/BE/GR)
	537K15844	7019 EPROM Kit (US/XCL/XLA)
	537K21770	7019 EPROM B8 KIt (RX-GB/IR/HK/SG/AU/NZ/ES)
	537K21780	7019 EPROM B8 Kit (RX-DE/IT/AT/CH)
	537K21791	7019 EPROM BA Kit (RX-FR)
	537K21800	7019 EPROM B9 Kit (RX-PT/DK)
	537K21810	7019 EPROM B8 Kit [RX-FI/SE/NO)
	537K21820	7019 EPROM B8 Kit [RX-CH)
	537K22140	7019 EPROM D3 Kit (RX-NL/BE/GR)

NOTE 1: When installing an EPROM kit in a 7018 W/O Tag 1, you must replace the CIS (PL 2.2) and mark Tag 1 on the Tag/MOD matrix.

RX Country Codes: AU=Australia, AT=Austria, BE=Belgium, CH=Switzerland, DK=Denmark, ES=Spain, FI=Finland, FR=France, DE=Germany, GB=United Kingdom, GR=Greece, HK=Hong Kong, IE=Ireland, IT=Italy, MY=Malaysia, NL=Netherlands, NZ=New Zealand, NO=Norway, PT=Portugal, SG=Singapore, SE=Sweden.

|PL 5.1 Telephones, Cables, and Cords



7018-5006-1

Item	Part	Description
1.	110K04820	Telephone and Cable (US/XLA)
	110K04460	Telephone and Cable (XCL)
	110K04950	Telephone and Cable (RX-GB)
	110K05000	Telephone and Cable (RX-DK)
	110K05010	Telephone and Cable (RX-NO)
|	110K05021	Telephone and Cable (RX-ES)
|	110K05030	Telephone and Cable (RX-AU/SG/MY)
	110K05040	Telephone and Cable (RX-NZ)
	110K05091	Telephone and Cable (RX-PT)
	110K05180	Telephone and Cable (RX-IT)
	110K05611	Telephone and Cable (RX-CH)
	110K05621	Telephone and Cable (RX-AT)
	110K05721	Telephone and Cable (RX-GR)
	110K05730	Telephone and Cable (RX-IE)
|	110K05860	Telephone and Cable (RX-FI)
|	110K05870	Telephone and Cable (RX-SE)
	110K05890	Telephone and Cable (RX-NL)
	110K05900	Telephone and Cable (RX-BE)
	110K05910	Telephone and Cable (RX-DE)
2.	117E06260	Telephone Data Cable (US/XCL/XLA)
	117S26668	Telephone Data Cable (RX-FR)
	152K49550	4-Spade to RJ11 Cable (RX)
	152K49560	BABT431 to RJ11 Cable (RX)
	152K49570	STSD23 to RJ11 Cable (RX)
	152K49580	RJ11 to RJ11 Cable (RX)
	152K49590	STHL19 to RJ11 Cable (RX)
	152K49600	Telephone Data Cable (RX-DK)
|	152K58470	RJ11 to TAES6N Cable (RX-DE)
|	152K58480	RJ11 to TAES6N Cable (RX-AT)
|	152K58490	RJ11 to TAES6N Cable (RX-CH)
3.	117P80447	Power Cord (US/XCL/XLA)
	152S92956	Power Cord (GB/IE)
	152S92957	Power Cord (RX, except GB/IE/CH)
	152S92959	Power Cord (CH)

RX Country Codes: AU=Australia, AT=Austria, BE=Belgium, CH=Switzerland, DK=Denmark, ES=Spain, FI=Finland, FR=France, DE=Germany, GB=United Kingdom, GR=Greece, HK=Hong Kong, IE=Ireland, IT=Italy, MY=Malaysia, NL=Netherlands, NZ=New Zealand, NO=Norway, PT=Portugal, SG=Singapore, SE=Sweden.

Common Hardware

Item	Part	Description
1	077K00400	Hardware kit
A	-	Screw (P 3 x 6-SK) (P/O item 1)
B	-	Plastic Rivet (P/O item 1)
C	-	PX Screw (P 3 x 8-SK) (P/O item 1)
D	-	PX Screw (P 3 x 8-SK-WS) (P/O item 1)
E	-	PX Screw (B 3 x 6-SK) (P/O item 1)
F	-	Nut (STN- W 4.8) (P/O item 1)
G	-	Screw (P 4 x 8-SK-WS) (P/O item 1)
H	-	PX Screw (P 3 x 8-SK) (P/O item 1)
J	-	PX Screw (B 2 x 6-SN) (P/O item 1)
K	-	Screw (P 2 x 10-SN-S) (P/O item 1)
L	-	PX Screw (P 3 x 8-SN) (P/O item 1)
M	-	Washer (WPC 3.10 x 7.0 x 0.5) (P/O item 1)
N	-	Washer (WPC 5.20 x 11.0 x 0.5) (P/O item 1)
P	-	Screw (P 2 x 8-SN-S) (P/O item 1)
R	-	Screw (P 3 x 6-SN) (P/O item 1)
S	-	Screw (P 3 x 8-SN-S) (P/O item 1)
T	-	Screw (P/O item 1)
U	-	PX Screw (P 3x 6 - SN) (P/O item 1)
V	-	Screw (P/O item 1)
W	-	Screw (P 3 x 5-SN-S) (P/O item 1)
X	-	Screw (L 3 x 6-SN) (P/O item 1)
Y	-	Screw (P 2 x 4-SN-S) (P/O item 1)

Part Number	PL Loc.
002E37660	4.1
002E37672	1.1
002E37680	1.1
002E37691	1.1
002E37700	1.1
002E38941	1.1
002E38951	1.1
002K39560	1.1
002K39571	1.1
002E40531	1.1
002E40541	1.1
002E40551	1.1
002E40561	1.1
002E40581	1.1
002E40591	1.1
002E40601	1.1
002E40611	1.1
002E40621	1.1
002E40631	1.1
002E40641	1.1
002E40651	1.1
002E40661	1.1
002E40681	1.1
002E40691	1.1
002E40701	1.1
002E40711	1.1
002E40721	1.1
002E40791	1.1
002E40801	1.1
002E41660	1.1
002E41670	1.1
002E42220	1.1
002E46950	1.1
002E46960	1.1
002K51081	1.1
002E53980	4.1
002E55850	1.1
002E55860	1.1
002E56710	1.1
002E56720	1.1
003K06280	1.1
003E22560	2.2
003E22570	2.2
007K05820	2.1
007K05830	2.2
007K05840	2.1
007E18730	2.2
007E18740	2.1, 3.1
007E18750	3.1
007E18760	2.1
007E18770	2.1
007E18780	2.1, 3.1
007E18790	2.1
009E34200	2.1
009K00800	2.1
009K00820	2.1
011K01730	2.2
013E07120	3.1
013E07130	2.1, 2.2
013E07140	2.2
017K01210	2.2
022E11450	2.1
022E11460	3.1
022K18960	2.2
022K18970	2.2
026K00830	2.2
037K00400	3.1
038E09940	3.1
038E09950	3.1
038E09961	3.1
038K07500	1.1
|038K07551	1.1
062K05860	2.2
068K01930	4.1
068K02000	4.1
068K03060	4.1
071K00500	1.1
071K00530	1.1
077K00400	common
090E01120	2.2
097K13040	1.1
101E07750	4.1
105K05371	4.1
105K07740	4.1
105K08810	4.1
108K00300	4.1
108K00310	4.1
110E04341	3.1
110E04351	2.2
|110K04460	5.1
110K04772	3.1
|110K04820	5.1
|110K04950	5.1
|110K05000	5.1
|110K05010	5.1
|110K05021	5.1
|110K05030	5.1
|110K05040	5.1
|110K05091	5.1
|110K05180	5.1
|110K05611	5.1
|110K05621	5.1
|110K05721	5.1
|110K05730	5.1
|110K05860	5.1
|110K05870	5.1
|110K05890	5.1
|110K05900	5.1
|110K05910	5.1
113K01621	4.1
113K01630	4.1
113K01640	4.1
113K01650	4.1
113K01670	4.1
113K01790	4.1
|117E06260	5.1
|117S26668	5.1
|117P80447	5.1
120E05730	2.2
127K09200	3.1
127K09210	2.1
130K51541	2.2
130K51551	4.1
130K51561	2.2
130K51892	4.1
130K51902	3.1
140K37691	4.1
140K37701	4.1
140K46070	4.1
140K46080	4.1
140K46100	4.1
|152K49550	5.1
|152K49560	5.1
|152K49570	5.1
|152K49580	5.1
|152K49590	5.1
|152K49600	5.1
|152K58470	5.1
|152K58480	5.1
|152K58490	5.1
|152S92956	5.1
|152S92957	5.1
|152S92959	5.1
537K15836	4.1
537K15844	4.1
537K21710	4.1
537K21720	4.1
|537K21731	4.1
537K21740	4.1
537K21750	4.1
537K21760	4.1
537K21770	4.1
537K21780	4.1
|537K21791	4.1
537K21800	4.1
537K21810	4.1
537K21820	4.1
|537K22130	4.1
|537K22140	4.1
600F70180	1.1
700P93006	1.1
700P93406	1.1

6. General Procedures / Information

6. General Procedures/Information

Section Contents

Introduction

The following is a description of the information contained within this section.

Fax Procedures discuss the service mode as compared to the normal customer mode. It contains a menu of parameters and procedures. Use the procedures to read and set software switches which enable or disable parameters that control the terminal.

Use diagnostic procedures to test the machine.

When you suspect a machine is functioning outside the range of its specifications, refer to product specifications. If the problem is a result of space, electrical, or environmental problems, call for management or sales assistance as needed.

Supplemental Tools and Consumables lists the required tools and materials needed to properly repair and maintain the terminal.

Changes in configuration to the terminal are assigned a Tag/MOD number. Information about a specific modification is found in the Tag/MOD Index in the Change Tag/MOD Information.

Other General Information contains ESD precautions, and a glossary of facsimile acronyms.

Installation and Removal provides the procedures required to install the machine or to repack the machine for removal.

Fax Procedures

Service Mode

In standby, the top line of the LCD displays **LOAD ORIGINALS**.

In service mode, the top line of the LCD displays **SERVICE FUNCTION**.

Procedure:

To enter the service mode from standby;

a. Press [Function Menu]
b. Press [*] on the keypad three times.
c. Press [Stop].

To exit the service mode, press [Stop] repeatedly until **LOAD ORIGINALS** is displayed.

Service Functions

Table 1 lists the functions that can be selected in the service mode. Table 1 also provides a subsection of section 6 that provides additional information for each function. Function 1 provides the capability to view and/or change options. The procedure below is a general procedure to use for any of the service mode functions.

Procedure

1. Enter the service mode.
   a. Press [Function Menu]
   b. Press [*] on the keypad three times.
   c. Press [Stop].
2. Use the keypad to select the desired function (1 to 5).
3. To enable the function, press [Enter] when the desired name is displayed.
4. If you chose function 1, enter the desired three digit number.

   If you chose function 2, 3, or 4; press [Enter], then press [Menu] until the desired item is displayed and then press [Start/Copy] or [Enter].

Table 1. Service mode

Function number	Function	Additional information
1	**Service set**	**Fax procedures**
2	**Service list**	**Fax procedures**
3	**Service test**	**Diagnostics procedures**
4	**Service clear**	**Diagnostics procedures**
5	**Service digit in**	**N/A**

The tests and features available in the service functions are listed in Table 2.

Table 2. Service mode

1 Service set	2 Service list	3 Service test	4 Service clear	5 Service digit in
SERVICE SET NO. =_ Enter three digit number from Table 3 or Table 4.	**21 PARAMETER LIST [MENU] OR [START]** [Function Menu] for 22 or [Start/Copy] to print.	**AUTO [MENU] OR [ENTER]** [Function Menu] for individual or [Enter] to perform all tests listed below. **LCD/LED, ROM, RAM, & Print Test Report (name, ID, firmware level, SW801 dip switch status, & ROM/RAM status).**	**41 USER OPTION RESET [MENU] OR [ENTER]** [Function Menu] for 42 or [Enter] to reset.	N/A
	22 TEST PATTERN [MENU] OR [START] [Function Menu] for 23 or [Start/Copy] to print.	**INDIVIDUAL [MENU] OR [ENTER]** [Enter], then [Function Menu] for next test or [Enter] to perform test. **TONE SEND** **SW/ALARM** (control panel switch) **SCAN MOTOR** **PRINT MOTOR** **LCD/LED TEST** **ROM TEST** **RAM TEST** **SENSOR TEST**	**42 SERVICE OPT RESET [MENU] OR [ENTER]** [Function Menu] for 43 or [Enter] to reset.	
	23 MEMORY DUMP [MENU] OR [ENTER] **(Engineering use only.)**		**43 COUNTER CLEAR [MENU] OR [ENTER]** [Function Menu] for 44 or [Enter] to clear.	
	24 ALL FILE [MENU] OR [START] **(Engineering use only.)**		**44 PENDING JOB CLEAR [MENU] OR [ENTER]** [Function Menu] for 45 or [Enter] to clear.	
			45 RAM ALL CLEAR [MENU] OR [ENTER] [Function Menu] for 41 or [Enter] to clear.	

Options

Table 3 Service Options (100 - 130) and Table 4 Customer Options (501 - 520) are shown on the following pages.

Service Options (see Table 3)

Service options are available only in service mode function 1 (Service Set). The tables list the options, the available selections, and the defaults for the options. The options may be changed because of a customer request, machine usage, environment, or some specific communications problems.

Customer Options (see Table 4)

Options 501 through 520 are normal customer options. These parameters can be changed by the customer and the technician.

Procedure

1. Enter service mode.
   a. Press [Function Menu].
   b. Press [*] on the keypad three times.
   c. Press [Stop].
2. Press [Function Menu].
3. Press [Enter].
4. Using the keypad enter the desired three digit option number from table 3 or table 4.
5. Press [Select] to change the selection or to scroll through the selections.
6. Press [Enter] to set the selection and display to the next option.

   NOTE: If you continue to press [Enter]. You will scroll through the service options, through the customer options, and back to the service options.

Table 3. Service options

Option	Selections (Note 1) Default *
[100 CALENDAR] Defines the sequence of characters; D=day, M=month, and Y=year	[YMD] RX [DMY]* USO [MDY]*
[101 SECURE RCV] Security reception.	[OFF]* [ON]
[102 SPD DISP] Communication speed displayed.	[OFF] [ON]*
[103 LNG ORG HM] - Long original permission.	[1000]* [Unlim] [600] [800]
[104 NOT AVAILABLE]	N/A
[105 POLLED F DEL] Automatic deletion of document in memory.	[OFF] [ON]*
[106 CODE] Coding scheme. 7019 has an additional code available.	7018 - [MH], [MR] [MR]* 7019 - [MH], [MR], [MMR] [MMR]*
[107 SEND SPD] Initial transmission speed attempted.	[96]* [72] [48] [24]
[108 RCV SPD] Initial reception speed attempted.	[96]* [72] [48] [24]
[109 CED SELECT] Frequency of CED signal.	[2100]* [1100]
[110 SEND LEVEL] Transmission attenuation in dBm. -15dBm is minimum signal transmission.	[0] thru [-15] [-9]*
[111 RCV LEVEL] Detection level in dBm of received signal. -46 dBm is minimum selectivity between noise and signal.	[-46] [-43]* [-38] [-35]
[112 ECHO PROTECT] V.29 echo protector tone.	[OFF]* [ON]
[113 SND CABL EQL] Transmission equalizer selected in MODEM.	[0]* [1.8] [3.6] [7.2]
[114 RCV CABL EQL] Reception equalizer selected in MODEM.	[0] [1.8] [3.6]* [7.2]
[115 COM. ER RES] Resend on communication error.	[OFF] [ON]*
[116 RE-SEND COUNT] Number of resend attempts.	[1] thru [16] [2]*

NOTE 1: Defaults vary with country requirements. Use the service function 42 to set the service options to default.

Table 3. (Continued)

Option	Selections (Note 1) Default *
[117 DIAL PULSE] Dial pulses must match the PPS telephone system requirement.	[10]* [16] [20]
[118 DIAL FORMAT] N=number dialed. Format must match the telephone system requirement.	[N]* [N+1] [10-N]
[119 PUS TIME] Seconds of waiting for pause time. DT DET waits to detect dial tone.	[DT DET] [0] - [12] [2]*
[120 PABX SELECT] PABX selection	No PABX [OFF]* Earth [E] Flash [F] 1 digit [1] 2 digit [2] 3 digit [3]
[121 REDIAL COUNT] Number of redial attempts.	[0] thru [15] 3*
[122 REDIAL T1] Redial interval between different numbers.	USO [10sec]* [30sec] RX [60sec]* [2min] thru [6min]
[123 REDIAL T2] Redial interval between the same number.	[10sec] [30sec] RX [60sec]* [2min] thru [6min] USO [3min]*
[124 REDIAL T3] Redial interval between a group of five numbers.	RX [[10sec]* [30sec] [60sec] [2min] thru [6min] USO [5min]*
[125 ALARM LEVEL] Volume of audible tone with 8 the maximum sound.	OFF [1] thru [8] USO [4]* RX [5]*
[126 HANDSET] Ability of attached device to dial or generate tones.	Hand set EXT. tel*
[127 MONITOR] Signals that can be heard from the speaker.	A-B* ALL OFF
[128 CNG DELAY] Seconds of delay after dial	0S* 1S OFF
[129 TAD SILENT] Seconds to wait before a disconnect after no sound is detected.	[3] [5] [8]* [10]
[130 RESEND DSABL] Disable after RTN in same call.	OFF* ON

NOTE 1: Defaults vary with country requirements. Use the service function 42 to set the service options to default.

Table 4. Customer options

Option	Selections (Note 3) Default *
[501 COPY RES] Scanner resolution for copy.	[STD] [FINE]* [S-FINE]
[502 CONTRAST] Image density control for copy and send.	[NORMAL]* [LIGHT] [DARK] [HALF]
[503 CONF REPORT] Confirmation report	[ON] [OFF]*
[504 CLOCK FORMAT] (Note 3)	[12H] [24H]*
[505 LANGUAGE] (Note 3)	[ENG]* [ESP] [FRE]
[506 SPEAKER VOL] 1=soft, 8=loud	[OFF] [1] thru [8] [4]*
[507 TEL ANS DEV] TAD=telephone answer device.	[OFF*] [ON]
[508 CALL TIMER] Displays seconds of off-hook time.	USO [ON]* RX [OFF]*
[509 CUT MODE] Determines when the paper is cut.	[PAGE]* [BATCH] [OFF]
[510 RELAY NO.] Identifies the 1-touch key on the relay 7019 that contains your fax telephone number.	[1] thru [16] [1]*

NOTE 1: Option is available for 7019 only.
NOTE 2: Option is only available in service options.
NOTE 3: Defaults vary with country requirements. Use the service function 41 to set the customer options to default.

Table 4. Continued

Option	Selections (Note 3) Default *
[511 RELAY REPORT] Option must be ON for the sending machine and the relay machine to generate a report. See option 510.	[ON]* [OFF]
[512 SEND RES] Resolution selection of the scanner.	[STD] [FINE]* [S-FINE]
[513 SEND HEADER] Position of the send identification information on the document.	[IN]* [OUT] [NONE]
[514 RING COUNT] Number of rings before machine answers automatically. Off lights the Manual Answer LED and disables the automatic answer.	[OFF] [1] THRU [16] USO [4]* (Note 2) RX [2]*
[515 DIAL SELECT] PPS is for rotary dial	USO [TONE]* RX [PPS]*
[516 RCV TO MEM] (Note 1) Forces received documents to memory.	[OFF]* [ON]
[517 ECM MODE] (Note 1) Error correction mode.	[ON]* [OFF]
[518 DIAL DETECT] Dial tone detect. Option is not applicable for RX.	USO [ON]* [OFF] RX: N/A
[519 BUSY DETECT] Option is not applicable for RX.	USO [ON]* [OFF] RX: N/A
[520 RELAY PRINT] (Note 1) Determines if machine prints documents that are relayed.	[ON]* [OFF]

NOTE 1: Option is available for 7019 only.
NOTE 2: Option is only available in service options.
NOTE 3: Defaults vary with country requirements. Use the service function 41 to set the customer options to default.

Parameter List (Report)

A report of the service parameter can be printed to identify the options and the current settings. This report should be printed after making any change to the service options to verify the changes.

Service parameter list is accessed while in service mode, Function 2: Service list.

Procedure

1. Enter service mode.
   a. Press [Function Menu].
   b. Press [*] on the keypad three times.
   c. Press [Stop].
2. Press [2] on the keypad.
3. Press [Enter].
4. Press [Start/Copy].

Test Pattern

The test pattern is used in level 1, ”Off line Check” to check the print quality of the terminal and to isolate between the (CIS) contact image sensor and the thermal head.

Test pattern is accessed while in service mode, Function 2: Service list.

Procedure

1. Enter service mode.
   a. Press [Function Menu].
   b. Press [*] on the keypad three times.
   c. Press [Stop].
2. Press [2] on the keypad.
3. Press [Enter].
4. Press [Function Menu].
5. Press [Start/Copy].

Memory Dump and All File

Engineering Use Only.

Table 4. Continued

Option	Selections (Note 3) Default *
[511 RELAY REPORT] Option must be ON for the sending machine and the relay machine to generate a report. See option 510.	[ON]* [OFF]
[512 SEND RES] Resolution selection of the scanner.	[STD] [FINE]* [S-FINE]
[513 SEND HEADER] Position of the send identification information on the document.	[IN]* [OUT] [NONE]
[514 RING COUNT] Number of rings before machine answers automatically. Off lights the Manual Answer LED and disables the automatic answer.	[OFF] [1] THRU [16] USO [4]* (Note 2) RX [2]*
[515 DIAL SELECT] PPS is for rotary dial	USO [TONE]* RX [PPS]*
[516 RCV TO MEM] (Note 1) Forces received documents to memory.	[OFF]* [ON]
[517 ECM MODE] (Note 1) Error correction mode.	[ON]* [OFF]
[518 DIAL DETECT] Dial tone detect. Option is not applicable for RX.	USO [ON]* [OFF] RX: N/A
[519 BUSY DETECT] Option is not applicable for RX.	USO [ON]* [OFF] RX: N/A
[520 RELAY PRINT] (Note 1) Determines if machine prints documents that are relayed.	[ON]* [OFF]

NOTE 1: Option is available for 7019 only.
NOTE 2: Option is only available in service options.
NOTE 3: Defaults vary with country requirements. Use the service function 41 to set the customer options to default.

Parameter List (Report)

A report of the service parameter can be printed to identify the options and the current settings. This report should be printed after making any change to the service options to verify the changes.

Service parameter list is accessed while in service mode, Function 2: Service list.

Procedure

1. Enter service mode.
   a. Press [Function Menu].
   b. Press [*] on the keypad three times.
   c. Press [Stop].
2. Press [2] on the keypad.
3. Press [Enter].
4. Press [Start/Copy].

Test Pattern

The test pattern is used in level 1, ”Off line Check” to check the print quality of the terminal and to isolate between the (CIS) contact image sensor and the thermal head.

Test pattern is accessed while in service mode, Function 2: Service list.

Procedure

1. Enter service mode.
   a. Press [Function Menu].
   b. Press [*] on the keypad three times.
   c. Press [Stop].
2. Press [2] on the keypad.
3. Press [Enter].
4. Press [Function Menu].
5. Press [Start/Copy].

Memory Dump and All File

Engineering Use Only.

Diagnostic Procedures

Service function 3 contains two different diagnostics tests, Auto and Individual.

The auto diagnostic test is used in the level 1, “Off Line Check” to test the LCD/LED, ROM, RAM and print the firmware level/dip switch status.

The individual diagnostic tests are used while performing the RAP procedures to isolate faulty components.

There are eight individual diagnostics tests available. They are:

- Tone send
- SW/Alarm
- Scan motor
- Print motor
- LCD/LED test
- ROM test
- RAM test
- Sensor test

A description of the tests and the appropriate procedures follow.

Auto Diagnostics

The terminal will sequence through the tests listed and print a report.

- lights flash on in sequence.
- all characters in ROM are displayed.
- ROM is tested.
- RAM is tested.
- Test report is printed.
  Local name & ID.
  ROM/RAM status.
  Dip switch status.
  Firmware level.

Procedure

1. Press [Function Menu].
2. Press [*] on the keypad three times.
3. Press [Stop].
4. Press [3] on the keypad.
5. Press [Enter] twice.

Tone Send

Send tonal signal allows you to select a tone that you want to test. You may choose from the following:

9600 bps	7200 bps	4800bps	2400bps
300	1100 hz	2100hz	DTMF1
DTMF2	DTMF3	DTMF4	DTMF5
DTMF6	DTMF7	DTMF8	DTMF9
DTMF*	DTMF0	DTMF#	

Procedure

1. Press [Function Menu].
2. Press [*] on the keypad three times.
3. Press [Stop].
4. Press [3] on the keypad.
5. Press [Enter].
6. Press [Function/Menu].
7. Press [Enter] twice.
8. Press [Menu] to scroll or select [01] through [19] for direct access.
9. Press {Enter].

SW/Alarm

The SW/Alarm test provides a method to functionally test each individual key on the control panel. This test will sound a tone and display the name of the key that was pressed.

Procedure

1. Press [Function Menu].
2. Press [*] on the keypad three times.
3. Press [Stop].
4. Press [3] on the keypad.
5. Press [Enter].
6. Press [Function Menu].
7. Press [Enter].
8. Press [Function Menu] .
9. Press [Enter].
10. Press each key individually.
11. A tone sounds and the name of the key is displayed.
12. Press [Stop] to end test.

Scan Motor

The scan motor test will allow you to test a suspect defective scan motor without having to perform an actual scan operation.

Procedure

1. Press [Function Menu].
2. Press [*] on the keypad three times.
3. Press [Stop].
4. Press [3] on the keypad.
5. Press [Enter].
6. Press [Function Menu].
7. Press [Enter].
8. Press [Function Menu] twice.
9. Press [Enter].
10. Scan motor operates.
11. Press [Stop] to end test.

Print Motor

The print motor test will allow you to test a suspect defective print motor without having to perform an actual test pattern or report operation.

Procedure

1. Press [Function Menu].
2. Press [*] on the keypad three times.
3. Press [Stop].
4. Press [3] on the keypad.
5. Press [Enter].
6. Press [Function Menu].
7. Press [Enter].
8. Press [Function Menu] three times.
9. Press [Enter].
10. Print motor operates.
11. Press [Stop] to end test.

LCD/LED Test

The LCD/LED test will allow you to test each individual LED and LCD characters as they scroll across the display.

Procedure

1. Press [Function Menu].
2. Press [*] on the keypad three times.
3. Press [Stop].
4. Press [3] on the keypad.
5. Press [Enter].
6. Press [Function Menu].
7. Press [Enter].
8. Press [Function Menu] until LCD/LED test is displayed.
9. Press [Enter].

ROM Test

The ROM test will allow you to test the terminal ROM in an attempt to isolate between the hardware and the firmware failure.

Procedure

1. Press [Function Menu].
2. Press [*] on the keypad three times.
3. Press [Stop].
4. Press [3] on the keypad.
5. Press [Enter].
6. Press [Function Menu].
7. Press [Enter].
8. Press [Function Menu] until ROM test is displayed.
9. Press [Enter].

RAM Test

The RAM test will allow you to test the terminal RAM in an attempt to isolate between the hardware and the firmware failure.

Procedure

1. Press [Function Menu].
2. Press [*] on the keypad three times.
3. Press [Stop].
4. Press [3] on the keypad.
5. Press [Enter].
6. Press [Function Menu].
7. Press [Enter].
8. Press [Function Menu] until RAM test is displayed.
9. Press [Enter].

Sensor Test

The test will provide a method to verify each individual sensor and interlock. This test has been incorporated into some procedures in chapter 2.

Reference Figure 1 and Table 1 for more information about the sensor or interlock being tested. The status of each component in standby is shown in Figure 1.

Procedure

1. Press [Function Menu].
2. Press [*] on the keypad three times.
3. Press [Stop].
4. Press [3] on the keypad.
5. Press [Enter].
6. Press [Function Menu].
7. Press [Enter].
8. Press [Function Menu] repeatedly until SENSOR TEST is displayed.
9. Press [Enter].
10. Load a document into the ADF and sensor 1 changes from (0) to (1). Sensor 2 changes from (0) to (1) after the document is fed to the scan sensor.
11. Open the front cover assembly. Sensor 3 changes from (0) to (1). Remove the document from the ADF.
12. Open the printer cover. Sensors 4 and 8 changes from (0) to (1).
13. Remove the recording paper from the print roller. Sensor 5 changes from (0) to (1).
14. Reinstall the recording paper. Close the printer cover and the cutter cycles. sensor 6 and sensor 7 change status (1/0) momentarily as the cutter cycles.

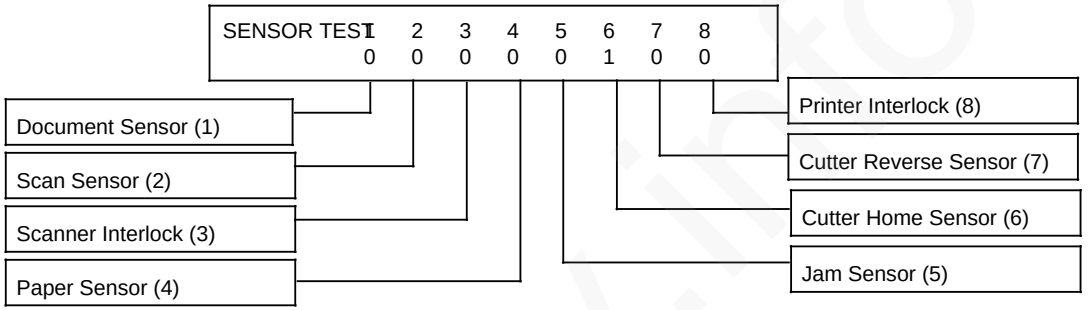


Figure 1. Sensor Test Display

Table 2. Sensor Status Descriptions

NO.	Sensor name	Status
1	Document sensor	(1) = Actuated (0) = Deactuated
2	Scan sensor	(1) = Actuated (0) = Deactuated
3	Scanner interlock	(1) = Actuated (0) = Deactuated
4	Paper sensor	(1) = Actuated (0) = Deactuated
5	Jam sensor	(1) = Actuated (0) = Deactuated
6	Cutter home sensor	(1) = Actuated (0) = Deactuated
7	Cutter reverse sensor	(1) = Actuated (0) = Deactuated
8	Printer interlock	(1) = Actuated (0) = Deactuated

Service Clear

Various kinds of information (telephone number, clock, local ID, etc.) are memorized in RAM (Random Access Memory) which is backed up by a battery. The information is held inside even if the power supply is turned off.

There are five clear functions listed under service clear. They are:

- User option reset
- Service option reset
- Counter clear
- Pending job clear
- RAM all clear

At installation, you should perform a ”RAM All Clear” function to clear all of the memory prior to setting the new information.

”RAM All Clear“ should also be performed whenever the main PWB is replaced. This should guarantee that the memory is reset correctly.

In some cases, erratic equipment operation can also be cleared by ”RAM All Clear”.

A description test and the appropriate procedures follow.

User Option Reset

This function will reset the current user settings to their default value.

Procedure

1. Press [Function Menu].
2. Press [*] on the keypad three times.
3. Press [Stop].
4. Press [4] on the keypad.
5. Press [Enter] twice.

Service Option Reset

This function will reset the current service option settings to their default value.

Procedure

1. Press [Function Menu].
2. Press [*] on the keypad three times.
3. Press [Stop].
4. Press [4] on the keypad.
5. Press [Enter].
6. Press [Function Menu].
7. Press [Enter].

Counter Clear

This function will clear the transaction counters (Send, reception and copy). The contents of each counter are printed in the total column on the activity report.

Procedure

1. Press [Function Menu].
2. Press [*] on the keypad three times.
3. Press [Stop].
4. Press [4] on the keypad.
5. Press [Enter].
6. Press [Function Menu] until Counter clear message is displayed.
7. Press [Enter].

Pending Job Clear

This function will clear all current jobs stored in memory.

Procedure

1. Press [Function Menu].
2. Press [*] on the keypad three times.
3. Press [Stop].
4. Press [4] on the keypad.
5. Press [Enter].
6. Press [Function Menu] until Pending job clear message is displayed.
7. Press [Enter].

RAM Clear All

This function will clear all areas of RAM, including the customer data.

Procedure

1. Press [Function Menu].
2. Press [*] on the keypad three times.
3. Press [Stop].
4. Press [4] on the keypad.
5. Press [Enter].
6. Press [Function Menu] until RAM all clear message is displayed.
7. Press [Enter].

Product Specifications

Type:
Portable desk top facsimile terminal

Product Codes

9M9 **RX:** 7018
9M8 **RX:** 7019
6L4 **USO:** 7018
6L6 **USO:** 7019
6L4 **XCI:** 7018
6L7 **XCI:** 7019
6L5 **XLA:** 7018
6L6 **XLA:** 7019

Electric Power

Voltage	US: 100VAC -10% to 127VAC + 10%, 50/60 Hz (Nominal 120 VAC) RX: 220 VAC - 10% to 240+10%
Phase	Single-phase three-wire system
Power consumption	Standby approximately 10 Watts
	Send approximately 30 Watts
	Receive approximately 30 watts
	Copy approximately 110 watts (full black)
Ground	Standard two pole, three prong, three wire grounded outlet

Environment

Temperature	50°F - 90°F (10°C - 32°C)
Humidity (Operating)	20% - 80% (without condensation)
Humidity (Non Operating)	5% - 85% (without condensation)
Atmospheric pressure (Altitude)	Maximum above sea level: 9900 feet (3000 m)

Dimensions

NOTE: Dimensions (with handset, trays and extended supports):

Dimensions	Terminal
Width	15.5 inches (395 mm)
Length / Depth	19.7 inches (500 mm)
Height	9.2 inches (235 mm)
Weight Unpacked	13 pounds (6.3 kg)

Minimum Space Required

The minimum space required around the machine is shown in Figure 1.

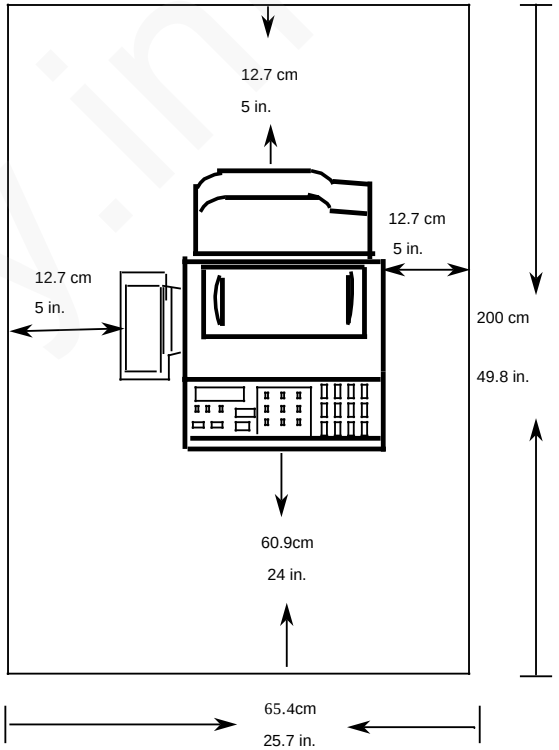


Figure 1. Space requirements

Documents

Sheet scanner (ADF specification)

Width	148 - 216 mm 5.8 in. - 8.5 in.
Length	100 - 356 mm 3.9 in. - 14 in.
Thickness	0.060 mm to 0.200 mm
Weight	16 to 24 pound bond
ADF capacity	20 sheets, letter or legal size 13 lb to 20 lb

Paper

Format	Thermal paper
Type	Thermal sensitive paper: 20 lb. bond
Size	8.5 inches x 328 feet (216mm x 100m)
Paper Roll capacity	100 meter
Output tray capacity	40 sheets

Scanning Method

Scanning unit has flat surface scanning by a Contact image sensor.

Recording Method

Recording method uses direct thermal printing and heat sensitive paper.

Copy Speed

Std/Fine: 23 seconds per page

Super Fine: 46 seconds per page

Scanning Line Density

Horizontal

2048 pels/256 mm±1%
1728 pels/215 mm ±1%

Vertical:

G3 (Fine)
7.70 lines/mm (195.6 lines/inch±1%)

G3 (Standard)
3.85 lines/mm (97.8 lines/inch±1%)

G3 (Super Fine)
15.4 lines/mm (392 lines/inch±1%)

Resolution

Group 3: Fine, Standard, Superfine, and Halftone

Halftone: 16-levels

Communication Mode

Compatibility:
CCITT Group 3
Modem/communication speed:
9600 BPS with automatic change to 7200, 4800, 2400 bps per CCITT V.29 and V.27 ter.

Memory Capacity

7018: 256K Bytes (15 documents)
7019: 1M Bytes (60 documents)

Telephone Requirements

The 7018 / 7019 comes equipped with its own telephone; a separate telephone is not necessary for operation of the machine. The telephone wall jack should be within 5 feet (1.5 meters) of the terminal. It should be a 6 position, 4 pin modular jack (USOC RJ11C). A single line (no key set or multiple locations on the same extension number) is recommended. The wall jack can be part of a PABX (Private Automatic Branch Exchange) system or CO (Central Office) telephone lines, but it must be RJ11 compatible.

US: FCC regulations

Part 68: Data coupler notice

This terminal contains an internal data coupler and a hearing aid compatible handset. Its use is restricted by the FCC (Federal Communications Commission). To comply with the FCC rules, you must carefully read and follow the instructions listed below:

1. If requested, you must give the telephone company the following information:
   - The telephone number connected to this terminal.
   - The FCC registration number for this terminal.

     The registration number is issued by the FCC, under part 68 of its Rules and Regulations, for direct connection to a telephone line. The number is printed on a label on the rear of the terminal.
   - The REN (Ringer Equivalence Number) of the terminal is printed on a label at the rear of the terminal. The REN for the terminal is printed on a label at the rear of the terminal.

   NOTE: The REN is used to determine the sum total of the devices you may connect to one telephone line and still have all of them ring when your telephone number is called. In many areas, the sum total of the REN of all devices connected to one line should not exceed five (5.0). To be certain, you should call your local telephone company to determine their maximum allowed REN for your calling area.

WARNING

Ask your local telephone company for the modular jack type installed on your line. Connecting this terminal to an unauthorized jack can severely damage telephone company equipment. You, not Xerox, assume all responsibility and/or liability for any damage caused by the connection of this terminal to an unauthorized jack.

2. You may safely connect this terminal to the following standard modular jack: USOC RJ11C. Use the standard line cord (with modular plugs) provided with the installation kit to connect it.

   Do **not** connect this terminal to a party or coin operated phone line.
3. Repairs to the terminal should only be made by Xerox or an authorized Xerox service agency. This applies at any time during or after the service warranty period. If unauthorized repair is performed, the remainder of the warranty period is null and void.
4. If you find the telephone line is damaged or the telephone company notifies you that your terminal is causing damage, disconnect the terminal from the telephone line and call for service. Do **not** reconnect the terminal until necessary repairs are made.
5. The telephone company will, where practical, notify you when they need to temporarily disconnect service. However, if action is reasonable and necessary, but prior notice is not practical, they may still temporarily disconnect your service. In such cases they must:
   - Immediately notify you of their temporary action.
   - Reconnect service when the source of damage is removed.
   - Inform you of your rights to bring a complaint to the FCC under FCC rules.
6. The telephone company may make changes to its communications facilities, equipment, operations, or procedures. Such action must be reasonable, required in the operation of their business, and consistent with FCC rules. They must give you prior written notification if the changes can:
   - Make your terminal incompatible with their equipment,
   - Require modification or alteration of the terminal,
   - Otherwise physically affect performance of the terminal.

US: Part 15: Class A computing device notice

WARNING

This terminal generates radio frequency energy. It complies with Class A computing device limits defined in Subpart J of Part 15 of FCC Rules.

Class A limits provide reasonable protection in a residential environment against interference with radio communications. Reasonable protection is not a guarantee against radio or television interference. Operation of this equipment in a residential area or with other peripherals not licensed as Class A can also cause interference (determined by turning the terminal on and off). If this terminal is not installed or used as instructed in this manual, it may cause interference.

You should try to correct the interference by changing the position of the terminal, the other device, the receiving antenna, or the power cords. If that does not work, try connecting the terminal to another wall outlet on a different line circuit. An experienced radio television technician may be able to provide additional suggestions. If this does not correct the interference, you will be required at your own expense to correct the interference. An FCC booklet, "HOW TO IDENTIFY AND RESOLVE RADIO-TV INTERFERENCE PROBLEMS" (stock number 004-000-00345-4) is available from the U.S. Government Printing Office, Washington, D.C., 20402.

XCI: Canadian DOC notices

Canadian radio noise emissions statement

NOTICE: The Canadian Department of Communications label identifies certified equipment. The certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the satisfaction of the user.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situation.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connection themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

The Load Number (LN) assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination of a loop may consist of any combination of devices subject only to the requirement that the total of the Load Numbers of all devices does not exceed 100. The Load Number for the terminal is printed on a label on the rear of the terminal.

XCI: Class A notice

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Tools/Consumables

Tools

Use the following test pattern for copy quality analysis.

Part No.	Description
082P00151	Test pattern (XTP327.000)

Consumables

Use the following consumables for the 7018/7019.

Part No.	Description
003R03892	Letter Paper 100m Roll (4 ea)
003R03891	A4 Paper 100m Roll (4 ea)

Tag/MOD Information

The manual is revised to include the latest machine changes listed in Table 1.

Tag/MOD Matrix

The Tag/MOD matrix is located on the rear right hand corner of the bottom cover. All important modifications to the terminal that are installed in the factory or in the field, are identified by a number marked on this matrix. The appropriate Tag/MOD number should be marked off or removed from the matrix whenever a Tag/MOD is installed.

Determine the Tag/MOD level of the terminal by the Tag/MOD matrix on the terminal.

If the matrix is illegible, refer to the Factory and field install serial numbers to determine which Tag/MOD(s) were installed at the factory and which are designated for installation in the field. If the serial number is designated as Field Install. Read the description to determine how to identify the Tag/MOD.

Tag/MOD Index

Refer to Table 1. Read the description to determine how the terminal will benefit from the Tag/MOD. Refer to the classification for each Tag/MOD and the explanation of each classification for information as to when to use the Tag/MOD. Refer to the bulletin number for additional Tag/MOD information.

Refer to the kit number to order the modification kit.

Tag/MOD Classification

Classification of Tag/MOD(s) are identified below by a letter (M, R, O, or N). The list below defines the degree of importance assigned to each letter:

- **M** Mandatory
- **R** Install at time of repair
- **O** Optional
- **N** Not for field retrofit. Factory retrofit only

Table 1. Tag/MOD Index

Tag/MOD and Classification	Description	Kit and Bulletin Numbers	Factory Install (Listed Serial Number and above)	Field Install (Listed Serial Number and below)
1 R	A Contact Image Sensor (CIS) and EPROM kit (B4 or above) for USO/XCL/XLA 7018 terminals. The new CIS provides a higher acceptance rate in manufacturing. Pretag 1 parts are not compatible with Tag 1 parts. The 7019 and all RX 7018 units will be built with Tag 1.	CIS, 62K05860 EPROM kit, 537K15833	6L4-017477 6L5-012344	6L4-017476 6L5-012344
2 M	220V power supply approved for Denmark.	105K07740	9M9- 9M8-	9M9- 9M8-
3				

Install

Preparation

- Plan the location for telephones lines and power cords so they will not clutter the area and so they are out of the way.
- Ensure that all space requirements are met.
- Since the equipment is air cooled, ensure that the ventilation holes on the back and top of the terminal are not blocked.
- Avoid locations near air conditioners, heaters, areas with rapid temperature fluctuations, direct sunlight, dust, vibration, chemicals, flammable materials, and excessive humidity.
- Prior to installation, check the status of the customer telephone (Pulse or Tone).
- The weight and size of the machine requires one individual to unpack, lift, and place in a proper location.
- The following installation and removal procedure is for service reference only. Additional details can be found in the User Handbook.

Parts Confirmation

1. Open the shipping carton and unpack the terminal. Check for scratches or other damage. Check the delivered items against the following list:

A.	Terminal	1
B.	Output tray	1
C.	Document Input tray	1
D.	Telephone cradle	1
E.	Telephone	1
F.	Telephone line cord	1
G.	Power cord	1
H.	User Handbook	1
J.	Roll of paper	1
K.	Telephone number label	1
L.	Warning label **(RX)**	1
M.	Material safety data sheets	1
N.	Customer assistance label **(USO)**	1
O	Language kit **(XCL, XLA)**	1

Assembly

Initial installation

NOTE: Always lift the machine at the base. Do not lift it at the control panel.

1. Remove the tape, packing, and/or protective film from the following:
   - Front cover.
   - Control panel.
   - Display panel.
   - ADF.
2. After verifying the space and electrical requirements (including an accessible wall outlet and telephone wall jack), place the terminal in the designated location.

Installing the telephone cradle

1. Place the terminal on its right side.
2. Remove the two screws taped to the bottom of the cradle.
3. Position the tabs on the cradle in the slots on the terminal and slide the cradle toward the control panel.
4. Fasten cradle to the bottom of the terminal with the two screws.

Installing the telephone and line

1. Locate the telephone line cord. Insert one end of the cord into the modular jack marked LINE on the left side of the terminal. Insert the other end of the cord into the telephone wall jack.
2. Locate the telephone. Insert the end of the telephone cord into either modular jack marked TEL on the left side of the terminal.
3. If you will be using an answering machine or second telephone with your fax machine, connect the telephone line cord from that device to the other TEL connector. Do not connect the answering machine directly into a telephone wall jack. The answering machine must be connected to the TEL jack to operate properly.
4. Place telephone on the cradle.
5. Place the terminal in the designated location.

NOTE: If desired, you can connect the answering machine and the handset to either TEL jack.

Installing the trays

1. Position the tabs on the document input extension tray over the slots located on the rear of the terminal. Gently lower the output tray so that it rests on the ribbed rear cover.
2. Move both document guides on the document input tray towards each other. Position the two tabs under the front corner of the tray in the slots on top of the terminal. Press down on both sides of the tray firmly so that the tray latches onto the hooks in the center of the paper cover.

Installing the paper

1. Push the blue printer cover release lever toward the rear of the terminal to open the cover. Lift the cover back until it latches.
2. Place the paper in the terminal.
3. The paper should feed over the roller under the green strip and should be visible through the slots.
4. Close the printer cover. Lift up on the cover to release the latch before closing.

Installing the power cord

NOTE: Do not install the terminal on the same electrical circuit as an air conditioner, copying machine or other high consumption electrical appliance. These appliances can cause electrical "draw downs" when they operate--temporarily reducing the power available for other equipment on the circuit--and could damage your fax.

1. Check the voltage as given in the specifications.
2. Switch off the power at the left rear side of the terminal.
3. Plug one end of the power cord into the left rear of the terminal. Plug the other end of the power cord into the wall outlet.
4. Switch on the power at the right side of the terminal.

Installing the customer assistance label **(USO)**

1. Copy the serial number from the plate located on the back of the terminal. Record the serial number in Section 8 of the user handbook in the subsection titled "To request assistance."
2. Remove the protective cover backing from the customer assistance label and carefully position the cover over the label.
3. Place the label on the handset near the ear piece.

Setting User Functions

1. If this is a new install, perform RAM clear.
   a. Press [Function Menu].
   b. Press [*] on the keypad three times.
   c. Press [Stop].
   d. Press 4 on the keypad.
   e. Press [Enter].
   f. Press [Function Menu] until RAM all clear message is displayed.
   g. Press [Enter].
2. Set time and date.
   a. Press [Function Menu].
   b. Press [4] on the keypad.
   c. Press [Enter].
   d. Press the [Function Menu] until menu [43 Date and Time] is displayed.
   e. Press [Enter].
   f. Use the arrow keys on the control panel or add double digits to advance the cursor.
   g. To change (AM/PM) setting, Press [Start] and [*] .
   h. Press [Enter] twice.
      ×× (Month)
      ×× (Date)
      ×× (Year)
      ×× (Hour)
      ×× (Minutes)
3. Set the local name and the local ID.
   a. Press [Function Menu].
   b. Press [4] on the keypad.
   c. Press [Enter].
   d. Press the [Function Menu] until menu [45 Local Name] is displayed.
   e. Press [Enter].
   f. Enter the local name using the keypad and the cursor keys.
   g. Press [Enter].
   h. Press [Select].
   i. Press [Enter] twice.
   j. Enter the Local ID.
   k. Press [Enter].

NOTE: The handset and the terminal have dial type setting. Both settings should be matched when installed (Tone or Pulse).

4. Set dialing type.
   a. Press [Function Menu].
   b. Press [5] on the keypad.
   c. Press [Enter] until [515 Dial Select] is displayed.
   d. Select either [Tone] or [PPS].
   e. Press [Enter].
5. Print an Options Report and verify the settings.
   a. Press [Function Menu].
   b. Press [3] on the keypad.
   c. Press [Enter].
   d. Press [Function Menu], until [35 Options Report] is displayed.
   e. Press [Start].

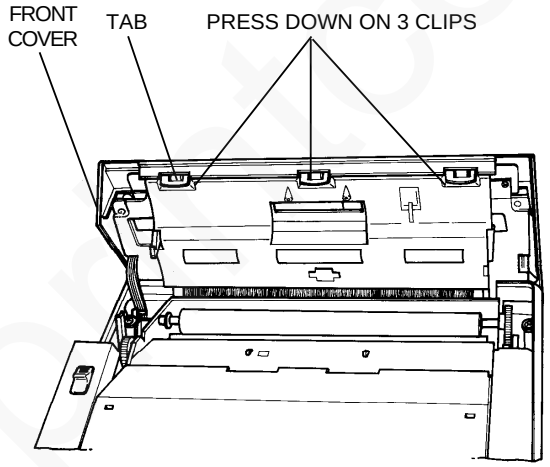


Figure 1. Control panel assembly

Panel Overlay Installation (XCL)

1. Locate the new language panel overlay. This overlay will replace the English panel overlay installed on the facsimile terminal.
2. Push the green button to the rear to open the front cover.
3. With the front cover open, locate the clips and tabs which are located at the edge of the cover. (Reference figure 1).
4. Release each clip from the tab by pressing down on the edge of the clip with your thumb.
5. When all 3 clips are released, the overlay can easily be removed from the front cover.
6. To install the new language panel overlay, put the tabs into the bottom slots in the cover and press the overlay against the cover until the overlay snaps into position and fits flush against the cover.
7. Close the front cover and refer to the user handbook for terminal installation, language selection, and other operating instructions.

Main PWB SW801 Configuration

SW801 is located on the Main PWB. This dip switch has six bit settings. The switch is used to determine the factory default language and the required configuration for each country. Refer to Table 1 for the appropriate configuration of SW801 for each country.

Table 1. Main PWB SW801 Settings

Country Note 1	Bits					
	1	2	3	4	5	6
USO/XCL/PT	OFF	OFF	OFF	OFF	OFF	OFF
XLA	OFF	OFF	OFF	OFF	OFF	OFF
GB/IE/HK	OFF	ON	OFF	OFF	OFF	OFF
SG/CH	OFF	ON	ON	ON	OFF	OFF
AU/DE/FR	OFF	OFF	OFF	ON	OFF	OFF
NZ	OFF	ON	OFF	ON	OFF	OFF
ES	OFF	OFF	ON	ON	OFF	ON
IT/DK	OFF	ON	ON	OFF	OFF	ON
AT	OFF	OFF	ON	OFF	OFF	OFF
NL	OFF	ON	OFF	ON	ON	OFF
BE/FI	OFF	ON	ON	OFF	OFF	OFF
GR	OFF	ON	OFF	OFF	OFF	ON
SE	OFF	OFF	ON	OFF	ON	OFF
NO	OFF	OFF	OFF	ON	OFF	ON

RX LCU PWB Configuration

The configuration of the switch (SW201) and the jumpers on the LCU PWB determine how the terminal will respond to facsimile signals and telephone equipment.

Table 1 shows the SW201 settings for each country. France does not have specified factory settings. Table 2 shows the required jumpers on the LCU for each country. Figure 1 shows the component locations on the RX LCU PWB.

Table 1. RX LCU PWB SW201 Settings

Country Codes	Bits					
	1	2	3	4	5	6
AT/BE/CH/DE/DK/ ES/FI/IT/NO/PT/ SE/SG	OFF	ON	OFF	OFF	ON	OFF
AU/GB/GR/HK/NZ	OFF	OFF	ON	OFF	OFF	ON
IE	OFF	OFF	OFF	ON	OFF	OFF
NL	OFF	ON	OFF	OFF	OFF	ON

Country code descriptions: AU=Australia, AT=Austria, BE=Belgium, DK=Denmark, FI=Finland, FR=France, DE=Germany, GR=Greece, HK=Hong Kong, IE=Ireland, IT=Italy, NL=Netherlands, NZ=New Zealand, NO=Norway, PT=Portugal, SG=Singapore, ES=Spain, SE=Sweden, CH=Switzerland, GB=United Kingdom

TABLE 2. RX LCU Jumper Locations

Country Connector	AT	AU	BE	CH	DE	DK	ES	FI	GR	GB/ HK	IE	IT	NL	NO	NZ	PT	SE	SG
JP201	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JP202	-	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-
JP203	-	-	-	X	X	X	-	-	-	-	X	-	-	-	-	-	-	-
JP204	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
JP205	X	X	X	-	X	X	X	X	-	-	-	X	-	X	-	X	X	-
JP206	-	X	-	-	X	-	X	-	-	-	-	-	X	-	-	-	X	-
JP207	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JP208	-	-	-	X	X	-	-	-	X	X	X	-	-	-	X	-	-	X
JP209	X	-	-	X	-	-	-	-	X	X	X	-	-	-	X	-	-	X
JP210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JP211	-	X	X	-	X	X	X	X	X	X	X	X	-	X	X	X	X	X
JP212	X	X	X	X	X	X	X	X	-	-	-	X	X	-		X	X	-
JP213	-	X	-	-	-	-	-	-	X	X	X	X	X	-	X	-	-	X
JP214	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
JP215	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
JP216	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
JP217	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
JP218	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
JP219	X	-	-	-	X	X	X	-	-	-	-	X	X	-	-	X	X	-
JP220	-	-	X	-	-	-	-	-	X	X	X	-	-	X	X	-	-	-
JP221	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-
JP222	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-
JP223	X	X	X	-	X	X	X	X	X	X		X	X	X	X	X	X	X
JP224	X	-	-	-	-	X	X	-	-	-		-	-	X	-	X	-	-
JP225	X	-	-	-	-	X	X	-	-	-		-	-	X	-	X	-	-
JP226	X	X	X	-	X	X	X	X	X	X		X	X	X	-	X	X	X
JP227	X	X	X	-	X	X	X	X	X	X		X	X	X	-	X	X	X
JP228	X	X	X	-	X	X	X	X	X	X		X	X	-	-	X	X	X
JP229	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-

NOTE: The character (X) indicates a jumper on that JP connector.

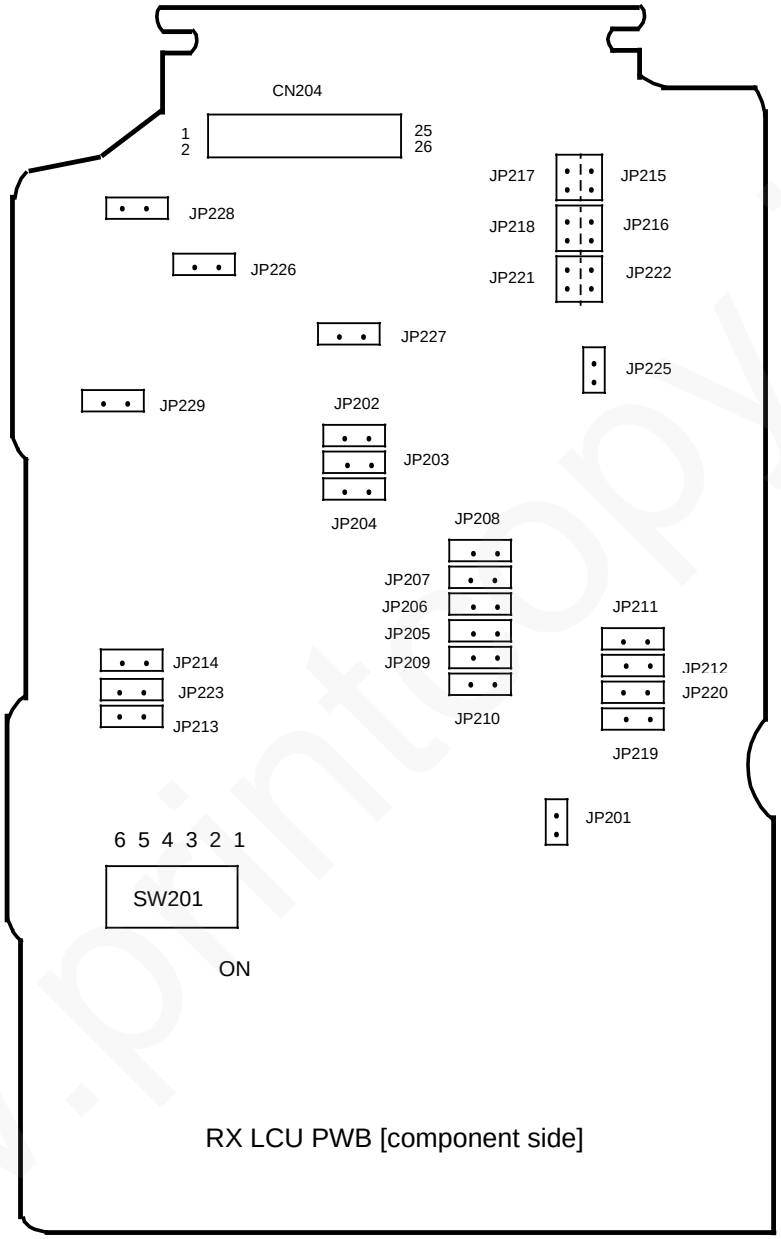


Figure 1. RX LCU PWB

7. Wiring Data

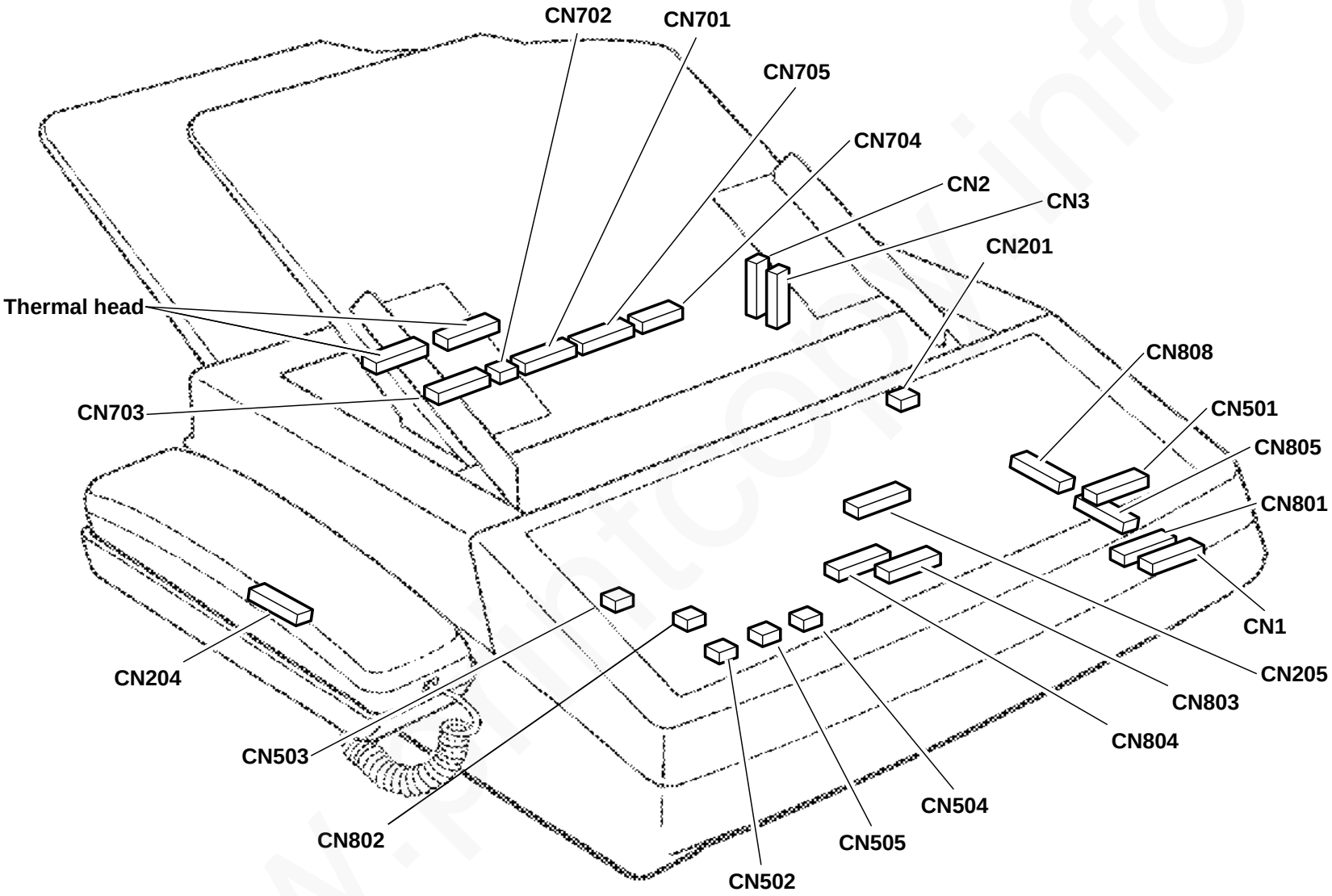
7. Wiring Data

Section Contents

Introduction

This section contains the connector locational and the pin identifiers. The tables for each connector list the information required to identify the connectors on the terminal.

All test points are located on the main PWB. The 7018 / 7019 terminal logic ground is not connected to frame ground. Due to this condition all circuit troubleshooting must be performed using TP803 as the ground point.

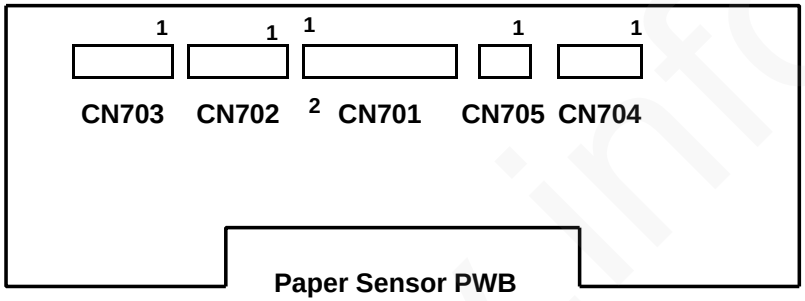


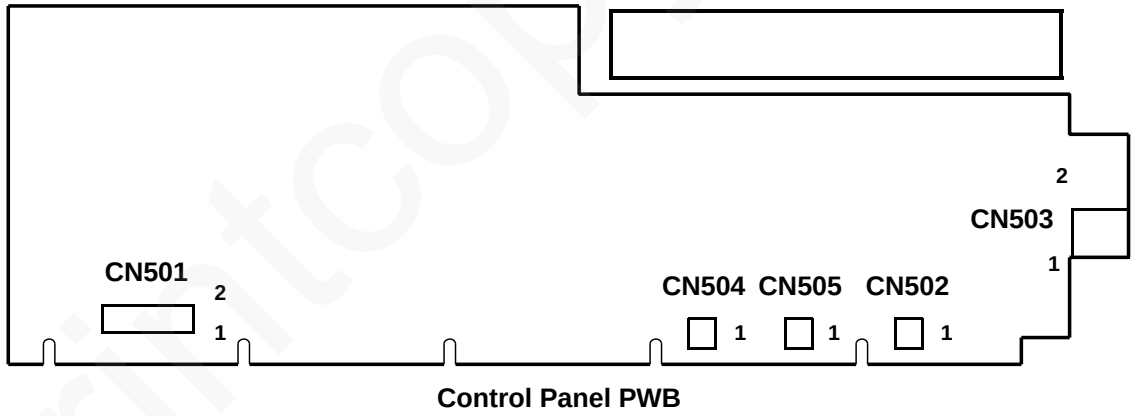
Connector location

Pin/Connector Identifiers

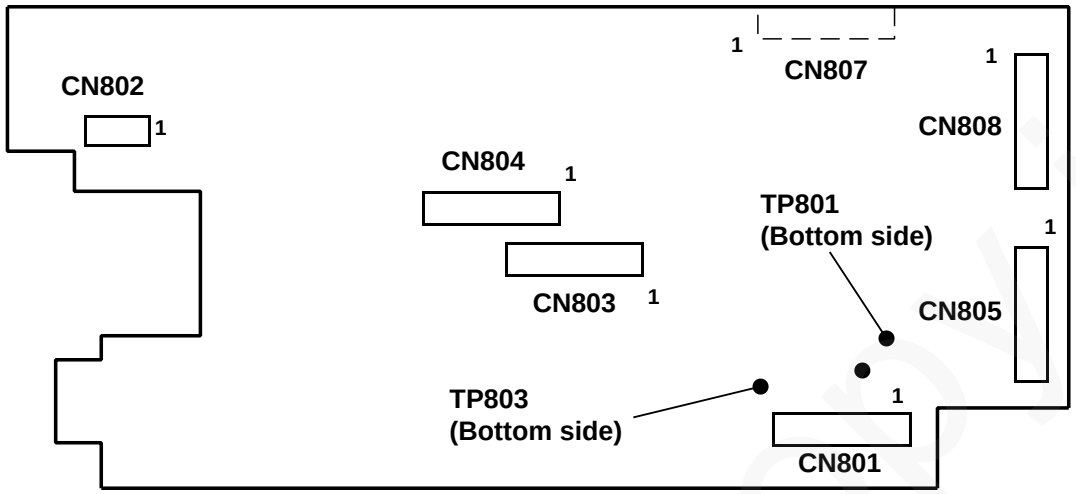
Table 1. Connector Identification

Connector number	Connections / destinations
CN1	Contact image sensor - Main PWB
CN2	Power Supply - Thermal head
CN3	Power Supply - Main PWB
CN201	(LCU) Coupler PWB - Speaker
CN204	(LCU) Coupler PWB
CN205	(LCU) Coupler PWB - Main PWB (CN807)
CN501	Control panel PWB - Main PWB (CN805)
CN502	Control panel PWB - Scanner interlock
CN503	Control panel PWB - Main PWB (CN805)
CN504	Control panel PWB - Document sensor
CN505	Control panel PWB - Scan sensor
CN701	Paper sensor PWB - Main PWB (CN804)
CN702	Paper sensor PWB - Paper cutter
CN703	Paper sensor PWB - Print motor
CN704	Paper sensor PWB - Jam sensor
CN705	Paper Sensor PWB - Printer Interlock
CN801	Main PWB - Contact image sensor (CN1)
CN802	Main PWB - Scan motor
CN803	Main PWB- Thermal head
CN804	Main PWB - Paper sensor PWB (CN701)
CN805	Main PWB - Control panel (CN501)
CN807	Main PWB - (LCU) Coupler PWB
CN808	Main PWB - Power supply

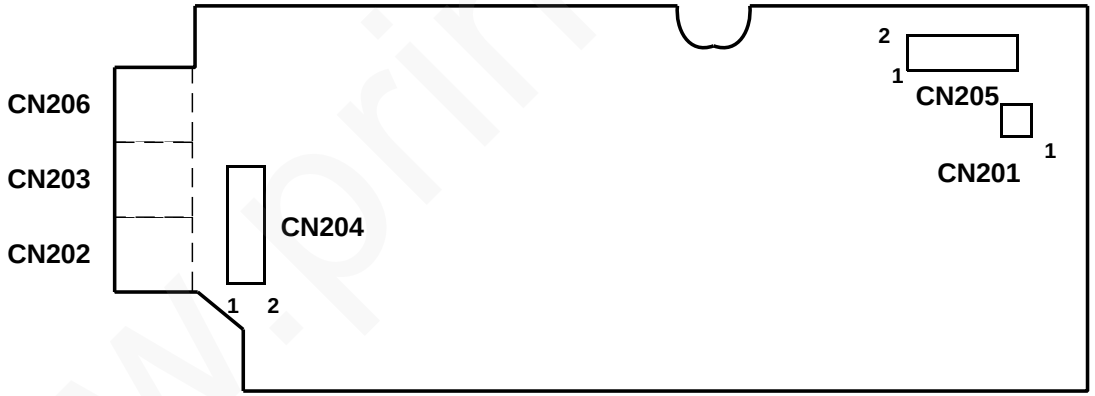




Pin/Connector Identifiers

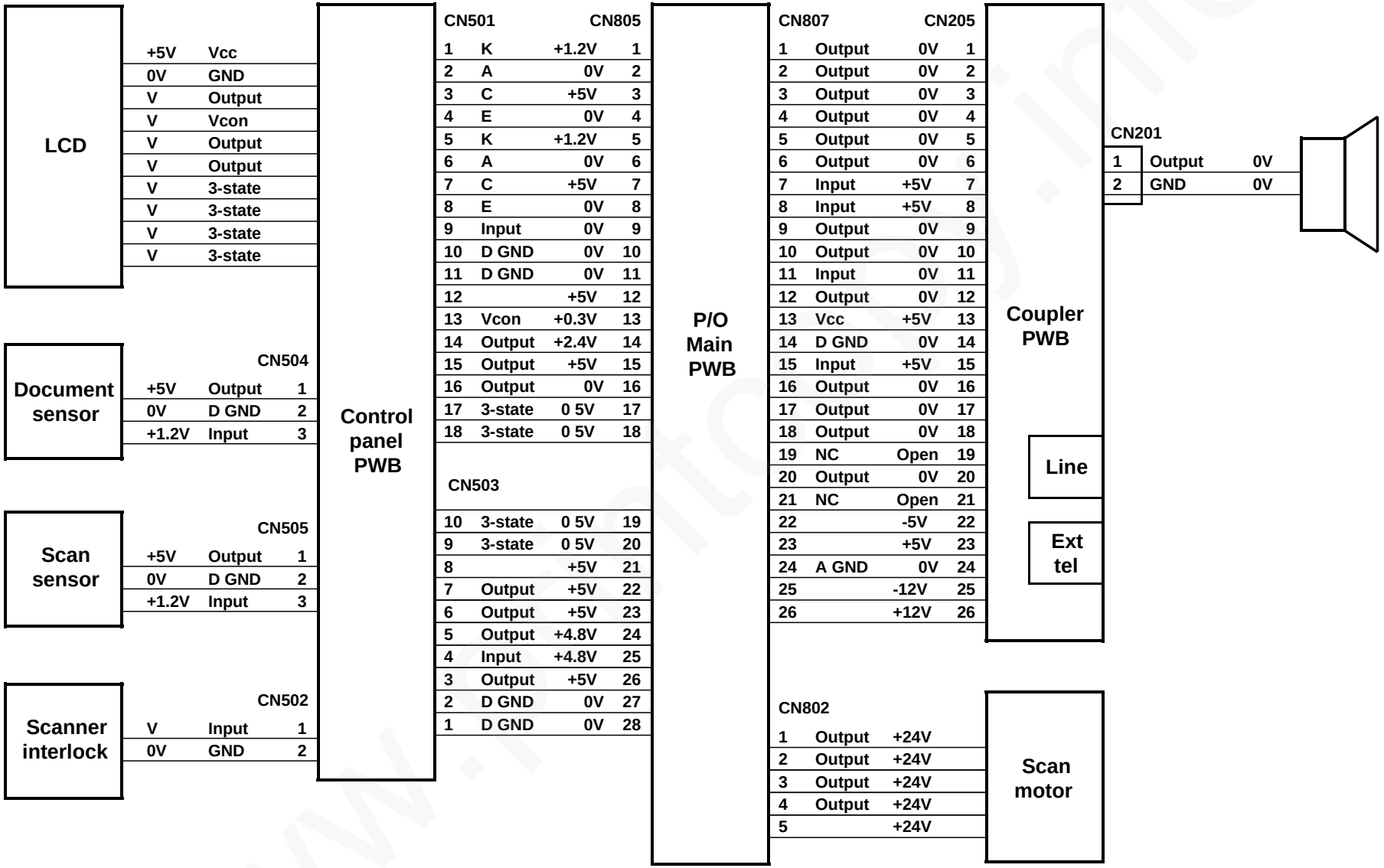


Main PWB

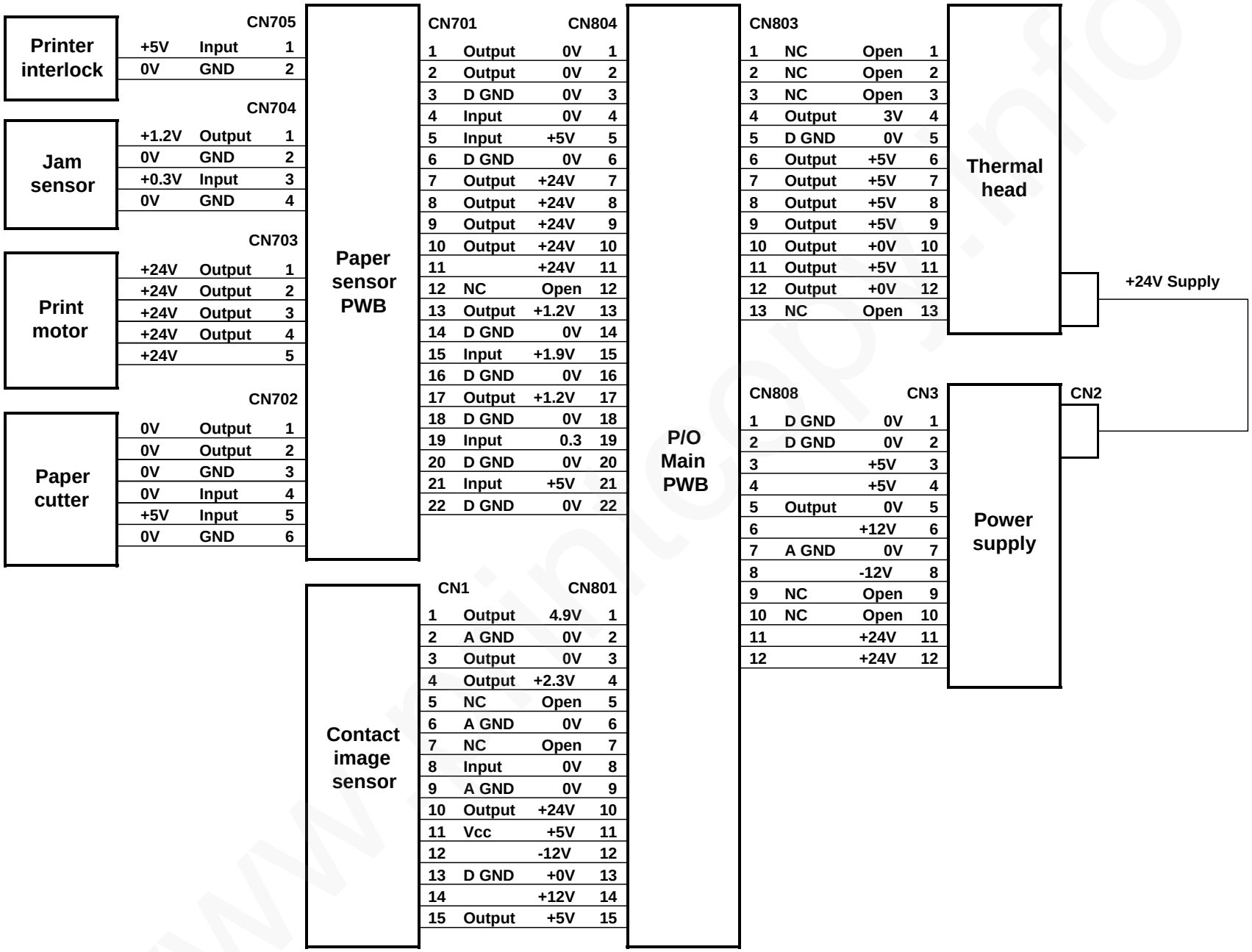


Coupler PWB

Interconnect Diagram



Interconnect Diagram (part 1)



Interconnect Diagram (part 2)

Connector/Pin Assignment

CN201 Speaker

Pin	From	To	Signal
1	Speaker	Coupler	0V
2	Speaker	Coupler	Gnd

CN205 Coupler PWB

Pin	From	To	Signal
1	Coupler	Main	0V
2	Coupler	Main	0V
3	Coupler	Main	0V
4	Coupler	Main	0V
5	Coupler	Main	0V
6	Coupler	Main	0V
7	Coupler	Main	+5V
8	Coupler	Main	+5V
9	Coupler	Main	0V
10	Coupler	Main	0V
11	Coupler	Main	0V
12	Coupler	Main	0V
13	Coupler	Main	+5V
14	Coupler	Main	D Gnd
15	Coupler	Main	+5V
16	Coupler	Main	0V
17	Coupler	Main	0V
18	Coupler	Main	0V
19	Coupler	Main	N/C
20	Coupler	Main	0V
21	Coupler	Main	N/C
22	Coupler	Main	- 5V
23	Coupler	Main	+5V
24	Coupler	Main	Gnd
25	Coupler	Main	-12V
26	Coupler	Main	+12V

CN501 Control Panel PWB

Pin	From	To	Signal
1	Panel	Main	+1.2V
2	Panel	Main	0V
3	Panel	Main	+5V
4	Panel	Main	0V
5	Panel	Main	+1.2V
6	Panel	Main	0V
7	Panel	Main	+5V
8	Panel	Main	0V
9	Panel	Main	0V
10	Panel	Main	D Gnd
11	Panel	Main	D Gnd
12	Panel	Main	+5V
13	Panel	Main	.3V
14	Panel	Main	2.4V
15	Panel	Main	+5V
16	Panel	Main	0V
17	Panel	Main	+0-5V
18	Panel	Main	+0-5V

CN502 Scan Interlock PWB

Pin	From	Via	To	Signal
1	Scan Intl	Panel	Main	0V
2	Scan Intl	Panel	Main	Gnd

CN503 LCD

Pin	From	To	Signal
1	Panel	Main	D Gnd
2	Panel	Main	D Gnd
3	Panel	Main	+5V
4	Panel	Main	+4.8V
5	Panel	Main	+4.8V
6	Panel	Main	+5V
7	Panel	Main	+5V
8	Panel	Main	+5V
9	Panel	Main	+0-5V
10	Panel	Main	+0-5V

CN504 Document Sensor PWB

Pin	From	Via	To	Signal
1	Doc Sen	Panel	Main	+5V
2	Doc Sen	Panel	Main	Gnd
3	Doc Sen	Panel	Main	+1.2V

CN505 Scan Sensor PWB

Pin	From	Via	To	Signal
1	Scan Sen	Panel	Main	+5V
2	Scan Sen	Panel	Main	Gnd
3	Scan Sen	Panel	Main	+1.2V

CN701 Paper Sensor PWB

Pin	From	To	Signal
1	Pap Sen	Main	0V
2	Pap Sen	Main	0V
3	Pap Sen	Main	D Gnd
4	Pap Sen	Main	0V
5	Pap Sen	Main	+5V
6	Pap Sen	Main	D Gnd
7	Pap Sen	Main	+24V
8	Pap Sen	Main	+24V
9	Pap Sen	Main	+24V
10	Pap Sen	Main	+24V
11	Pap Sen	Main	+24V
12	Pap Sen	Main	N/C
13	Pap Sen	Main	+1.2V
14	Pap Sen	Main	D Gnd
15	Pap Sen	Main	+1.9V
16	Pap Sen	Main	D Gnd
17	Pap Sen	Main	+1.2V
18	Pap Sen	Main	D Gnd
19	Pap Sen	Main	+.3V
20	Pap Sen	Main	D Gnd
21	Pap Sen	Main	+5V
22	Pap Sen	Main	D Gnd

CN702 Paper Cutter

Pin	From	Via	To	Signal
1	Pap. Cut	Pap Sen	Main	0V
2	Pap. Cut	Pap Sen	Main	0V
3	Pap. Cut	Pap Sen	Main	Gnd
4	Pap. Cut	Pap Sen	Main	0V
5	Pap Cut	Pap Sen	Main	+5V
6	Pap Cut	Pap Sen	Main	0V

CN703 Print Motor

Pin	From	Via	To	Signal
1	Prt Mot	Pap Sen	Main	+24V
2	Prt Mot	Pap Sen	Main	+24V
3	Prt Mot	Pap Sen	Main	+24V
4	Prt Mot	Pap Sen	Main	+24V
5	Prt Mot	Pap Sen	Main	+24V

CN704 Jam Sensor

Pin	From	Via	To	Signal
1	Jam Sen	Pap Sen	Main	+1.2V
2	Jam Sen	Pap Sen	Main	Gnd
3	Jam Sen	Pap Sen	Main	+.3V
4	Jam Sen	Pap Sen	Main	Gnd

CN705 Printer Interlock

Pin	From	Via	To	Signal
1	Jam Sen	Pap Sen	Main	+5V
2	Jam Sen	Pap Sen	Main	Gnd

CN801 Main PWB

Pin	From	To	Signal
1	Main	CIS	5V
2	Main	CIS	Gnd
3	Main	CIS	0V
4	Main	CIS	2.3V
5	Main	CIS	N/C
6	Main	CIS	0V
7	Main	CIS	N/C
8	Main	CIS	0V
9	Main	CIS	Gnd
10	Main	CIS	+5V
11	Main	CIS	Gnd
12	Main	CIS	-12V
13	Main	CIS	D Gnd
14	Main	CIS	+12V
15	Main	CIS	+5V

CN802 Main PWB

Pin	From	To	Signal
1	Main	Scan Mot	+24V
2	Main	Scan Mot	+24V
3	Main	Scan Mot	+24V
4	Main	Scan Mot	+24V
5	Main	Scan Mot	+24V

CN803 Main PWB

Pin	From	To	Signal
1	Main	T/H	N/C
2	Main	T/H	N/C
3	Main	T/H	N/C
4	Main	T/H	+3V
5	Main	T/H	D Gnd
6	Main	T/H	+5V
7	Main	T/H	+5V
8	Main	T/H	+5V
9	Main	T/H	+5V
10	Main	T/H	0V
11	Main	T/H	+5V
12	Main	T/H	0V
13	Main	T/H	N/C

CN804 Main PWB

Pin	From	To	Signal
1	Main	Pap Sen	0V
2	Main	Pap Sen	0V
3	Main	Pap Sen	D Gnd
4	Main	Pap Sen	0V
5	Main	Pap Sen	+5V
6	Main	Pap Sen	D Gnd
7	Main	Pap Sen	+24V
8	Main	Pap Sen	+24V
9	Main	Pap Sen	+24V
10	Main	Pap Sen	+24V
11	Main	Pap Sen	+24V
12	Main	Pap Sen	N/C
13	Main	Pap Sen	+1.2V
14	Main	Pap Sen	D Gnd
15	Main	Pap Sen	+1.9V
16	Main	Pap Sen	D Gnd
17	Main	Pap Sen	+1.2V
18	Main	Pap Sen	D Gnd
19	Main	Pap Sen	.3V
20	Main	Pap Sen	D Gnd
21	Main	Pap Sen	+5V
22	Main	Pap Sen	D Gnd

CN805 Main PWB

Pin	From	To	Signal
1	Main	Panel	+1.2V
2	Main	Panel	0V
3	Main	Panel	+5V
4	Main	Panel	0V
5	Main	Panel	+1.2V
6	Main	Panel	0V
7	Main	Panel	+5V
8	Main	Panel	0V
9	Main	Panel	0V
10	Main	Panel	D Gnd
11	Main	Panel	D Gnd
12	Main	Panel	+5V
13	Main	Panel	+.3V
14	Main	Panel	+2.4V
15	Main	Panel	+5V
16	Main	Panel	0V
17	Main	Panel	+0-5V
18	Main	Panel	+0-5V
19	Main	Panel	+0-5V
20	Main	Panel	+0-5V
21	Main	Panel	+5V
22	Main	Panel	+5V
23	Main	Panel	+5V
24	Main	Panel	+4.9V
25	Main	Panel	+4.8V
26	Main	Panel	+5V
27	Main	Panel	D Gnd
28	Main	Panel	D Gnd

CN807 Main PWB

Pin	From	To	Signal
1	Main	Coupler	0V
2	Main	Coupler	0V
3	Main	Coupler	0V
4	Main	Coupler	0V
5	Main	Coupler	0V
6	Main	Coupler	0V
7	Main	Coupler	+5V
8	Main	Coupler	+5V
9	Main	Coupler	0V
10	Main	Coupler	0V
11	Main	Coupler	0V
12	Main	Coupler	0V
13	Main	Coupler	+5V
14	Main	Coupler	D Gnd
15	Main	Coupler	+5V
16	Main	Coupler	0V
17	Main	Coupler	0V
18	Main	Coupler	0V
19	Main	Coupler	N/C
20	Main	Coupler	0V
21	Main	Coupler	N/C
22	Main	Coupler	- 5V
23	Main	Coupler	+5V
24	Main	Coupler	Gnd
25	Main	Coupler	-12V
26	Main	Coupler	+12V

CN808 Main PWB

Pin	From	To	Signal
1	Main	P/S	D Gnd
2	Main	P/S	D Gnd
3	Main	P/S	+5V
4	Main	P/S	+5V
5	Main	P/S	0V
6	Main	P/S	+12V
7	Main	P/S	Gnd
8	Main	P/S	-12V
9	Main	P/S	N/C
10	Main	P/S	N/C
11	Main	P/S	+24V
12	Main	P/S	+24V

Ground Connections

Left side of terminal

From	Via	To
Scanner gear plate		Print motor
Print motor bracket	Power supply	Cutter bracket
Cutter bracket		Paper guide
Paper guide		Printer latch
Scanner gear plate		Guide
Scanner gear plate		Plate - ADF roller area

Right side of terminal

From	Via	To
Print cover hinge		Upper scanner - bar
Cutter bracket	Paper guide	Scanner Lock plate
Cutter bracket		Power supply
Paper guide		Printer latch shaft
Scanner lock plate		Scanner lock plate
Scanner bracket		Plate - ADF roller area
Scanner bracket		Retard Pad